School of Management

Examining the performance of coffee supply chains in Central Vietnam: An Exploratory Study

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DECLARATION

To best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgement has been made.

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Date: January 2017

ABSTRACT

Supply chain performance measurement has long been recognised as an important means of guiding activities to deliver more value to customers. Measuring supply chain performance can facilitate a greater understanding of the supply chain, positively influence supply chain actors' behaviour and improve their overall performance. Measuring supply chain performance can enhance collaboration between supply chain actors and decrease supply chain problems.

This thesis examines the performance of Vietnam coffee supply chains and identifies the constraints to facilitate ongoing development of the coffee industry. While Vietnam is the world's second largest coffee producer, the production focuses on quantity rather than quality. Returns to farmers are very price sensitive and highly dependent on the dynamics of the international coffee market. To improve returns to smallholder farmers, there is an urgent need to integrate their activities with other actors to improve the performance of the entire supply chain. A comprehensive exploratory study was conducted in the Central Highlands of Vietnam using three parallel methodologies: price-margin analysis, gap analysis and relationship marketing management.

The study found that quality at the farm gate was problematic, for much of the product is harvested immature, and price signals did not provide a sufficient incentive to encourage farmers to improve quality. For the buyers, although smallholder farmers were able to provide coffee that was competitively priced, they were not able to deliver sufficient quantities and desired quality. Moving down the supply chain, the marketing margin increases to cover the increasing marketing costs and losses, and the uncertainty of price inherent in highly volatile markets. As payment are generally made after the purchased coffee has been sold, to reduce risk, all actors along the chain prefer to transact with those exchange partners whom they have developed trust through enduring long-term relationships. As the geographic distance between actors increases, relationships down the supply chain become increasingly less personal and more businesslike.

This study provides important insights to improve the coffee supply chain in Vietnam. It is hoped that the rich body of information and research emerging from this study can be used to enhance the development of the coffee industry in Vietnam.

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GLOSSARY

Terms and definitions

It is necessary to clarify a number of terms that are integral to this study.

In this study, references are made to production quantities, using coffee/ marketing years. The coffee/ marketing year is recognised as being the International Coffee Organisation's accounting period from October to September, where coffee is harvested across this period.

Coffee

The variety of coffee distributed along supply chains are Arabica, Robusta, Excelsa and Catimor. Since the focus in this study is on Robusta, the main product from this point onwards, the term 'coffee' refers to 'Robusta coffee'.

Coffee bag

A coffee bag is a bag of 60 kilograms of coffee.

Collector agent

A collector agent is a person who buys coffee from farmers.

Company

A company is a firm who exports coffee.

Farmer

A farmer is a person who produces coffee.

Trader

A trader is a person who buys coffee in large quantities from a collector agent.

CHAPTER 1
INTRODUCTION

1.1 Introduction

Supply chain management has developed into a major conceptual approach within management and business administration. A supply chain is defined as a network of several activities that function to procure materials, transform this material into products, and distribute these products through various chain participants to consumers (Hugos 2011). Supply chain management is the integration of these activities through improved supply chain relationships to achieve a sustainable competitive advantage (Singh et al. 2014).

According to Van der Vorst (2000), supply chain management is a set of activities which aim to fulfil a specified customer or market requirement. In line with that Lambert and Cooper (2000), developed supply chain management further as the control of all business activities in the supply chain to deliver superior value to customer. Recently, Wisner, Tan, and Leong (2015) referred to supply chain management as the coordination of activities among supply chain participants to improve operational efficiencies, quality and customer services. Firms have begun to realize that it is not enough to improve efficiencies within an organisation, but they must also improve efficiencies within their supply chain as a whole to be competitive. It has been pointed out that understanding and practising supply chain management has become an essential prerequisite to stay globally competitive and to grow profitably (Bozarth and Handfield 2015). There are variety of benefits that supply chain management well-recognized, including reduced costs (Singh et al. 2014), increased values and greater market sales (Crook et al. 2008).

Supply chain performance measurement is a vital part of the management system and has long been recognised as a valuable means of guiding activities to deliver more value to customers (Melnyk, Stewart and Swink 2004). Performance measurement, in the context of a supply chain, has become more important as evidenced by the increasing number of publications over the past two decades (Monczka et al. 2015; Braz, Scavarda and Martins 2011; Nudurupati et al. 2011; Waller, Fabbe-Costes and

Jahre 2008; Croom et al. 2007; Giannakis 2007; Fynes, De Burca and Voss 2005; Chan 2003; Tan 2002). Measuring supply chain performance can facilitate a greater understanding of the supply chain, positively influence actors' behaviour and improve their overall performance (Chen and Paulraj 2004). Measuring supply chain performance can improve the understanding and collaboration between supply chain actors (Chan 2003) and increase supply chain integration (Gunasekaran, Patel and Tirtiroglu 2001).

Agricultural supply chains in developing countries typically involve many small farmers and several layers of market intermediaries. Typically, economic exchange is closely associated with social structures (Chandrasekaran and Raghuram 2014). The supply chain itself is often fragmented, thus leading to high transaction costs (Woods, Johnson and Hofman 2004). There has also been much discussion about the potential exploitation of small farmers by various market intermediaries (Batt 2003c). As the farmers depend on market intermediaries for financial assistance, they may find it necessary to engage in unfair long-term relationships (Mendoza and Rosegrant 2012).

Furthermore, the inequitable sharing of power frequently creates conflict among members of a supply chain (Roberts, Varki and Brodie 2003). This characteristic has historically impeded the process of trust building (Van Bruggen, Kacker and Nieuwlaat 2005). Thus, achieving effective alignment among all participants in a supply chain is problematic (Song et al. 2012).

The coffee industry in Vietnam is often considered to be a very lucrative industry, which can generate opportunities for unfair trading. Thus, it is very important to investigate how the actors in the chain operate in this kind of environment, especially in the absence of an effective legal system to enforce fair trading.

While the theory to support the development of a business performance measurement system is well-developed, its focus is only on a single company (Chan 2003). Therefore, it is necessary to review and to apply business performance measurement systems to entire supply chains.

Garengo, Biazzo, and Bititci (2005) addressed that the interactions among important supply chain characteristics will be ignored in the case a supply chain performance measurement system using a single performance measure. Another important consideration when measuring supply chain performance is the need to adopt a systemic approach (Braz, Scavarda and Martins 2011; Chan and Qi 2003; Chan 2003). Therefore, measuring the supply chain performance for coffee is best attained using multiple performance measures that integrate multiple approaches (Murray-Prior et al. 2004) namely: (1) identifying the activities that different actors perform in the chain; (2) identifying whether these activities meet their trading partners' expectations; and (3) how relationships between the participants in the chain moderate their behaviour and thus their performance.

By looking at the activities that actors perform and the costs associated with undertaking those activities, price margins will be examined. Price margin analysis enables researchers to see what margins are generated by each of the different activities and who retains the profit in the supply chain. This is important as the farmers and other participants in the supply chain are unlikely to change their activities when there are no incentives.

As the management of activities across the members of a supply chain can significantly impact the overall supply chain performance (Chen and Paulraj 2004), every supplier along the chain must understand the buyer's needs to extract maximum profit (Batt, Concepcion and Digal 2006). Understanding each other's needs allows the various participants in the supply chain to work together to improve and enhance value in the chain (Hobley and Batt 2010). With a better understanding and ability to satisfy customers' needs, firms can achieve greater customer loyalty and higher repeat sales.

According to Neely, Gregory, and Platts (1995), effective supply chain performance is the extent to which a customer's requirements are met. Therefore, it is important to find the gap between existing actor's abilities and what is required by their customers (Parasuraman, Zeithaml and Berry 1985). As the gaps along the chain have a very important impact on costs, quality and profit, it is important to close these gaps to achieve effective supply chain management (Christopher 2016). However, effective

supply chain management depends not only on closing the gaps and changing activities, but also on the relationships amongst the participants along the chain (Herlambang et al. 2006).

An examination of the relationships between the actors in the supply chain is instrumental in determining the extent to which exchange partners are willing to work together. With more communication, there is greater collaboration between the supply chain members, enabling them to better cope with uncertainty in their external environment (Mentzer, Foggin and Golicic 2000). In addition, the more they collaborate, the better equipped they are to thrive in a competitive and turbulent environment (Christopher and Juttner 2000).

Measuring supply chain performance can reveal improvements to the situation not only for the farmers, but also for other participants along the supply chain. Effective supply chain management is recognised as key to building sustainable competitive advantage (Lambert and Cooper 2000; Tracey, Lim and Vonderembse 2005).

1.2 Research problem

Numerous studies have been dedicated to investigating the coffee industry in Vietnam (Viere, Enden and Schaltegger 2011; Eakin, Winkels and Sendzimir 2009; D'haeze, Deckers, et al. 2005; Lewin, Giovannucci and Varangis 2004; Rios and Shively 2016; Muradian and Pelupessy 2005; ICARD 2002; Phuoc et al. 2016; Lindskog et al. 2005; D'haeze, Raes, et al. 2005; Adger, Eakin and Winkels 2009; Greenfield 2002; Tan 2000; Nhan 2002). Lewin, Giovannucci, and Varangis (2004) offered a thorough look at the functions and trends of the coffee industry within an enlightened context of its history and fundamental structure. Viere, von Enden, and Schaltegger (2011) illustrated the use of environmental management accounting in exporting firm. Phuoc et al. (2016) described the influence of change in agricultural policies on land management, environment and the livelihood of the coffee community in the highlands of Vietnam. Lindskog et al. (2005) indicated the challenges to sustainable farmers' livelihoods with rapid changes in the environmental, social and economic conditions of Dak Lak. ICARD (2002) analysed the impact of the global coffee trade on Dak Lak province and provided some

recommendations. Greenfield (2002) described the impact of the world coffee crisis on the Vietnam coffee industry. Muradian and Pelupessy (2005) explored the advantages and limitations of voluntary regulatory systems in the coffee chain. D'haeze, Raes, et al. (2005) described the land use expansion for Robusta coffee and the consequences in ecological and social terms. Eakin, Winkels, and Sendzimir (2009) discussed farm-level vulnerability and livelihood security in Mexico and Vietnam.

Prior research on the coffee industry in Vietnam has largely provided general information about the coffee industry, or focused on one specific aspect of the industry, such as environment or land use. However, many important aspects for examining supply chain performance are absent (e.g., the prices and marketing costs, trading partners' perceptions and expectations on selling and purchasing, as well as the nature of the business relationships between participants).

Given the importance of the coffee industry in Vietnam, this study will examine the performance of the coffee supply chain.

The research questions for this study are:

1. What are the net margins extracted by actors in the Vietnamese coffee supply chains?

2. Is there a gap between what the farmers want and what they receive from their downstream market intermediaries? If there is a gap, what improvements and possible future work are required to close the gap?

3. Is there a gap between what market intermediaries want and what they receive from their upstream suppliers? If there is a gap, what improvements and possible future work are required to close the gap?

4. How are the actors in coffee supply chains managing their relationships?

The Vietnamese coffee industry contributes significantly to the National GDP and employs over 80% of the farming population (GSO 2013). Farmers, as well as other

participants in the supply chain, will benefit if the supply chain is managed effectively. By recognising the functions that each exchange partners performs in the supply chain, participants can match their capabilities with their upstream/ downstream partners' needs. Furthermore, competitive advantage can be maximised when all members along the supply chain work together to serve consumers (Singh et al. 2014).

1.3 Research objectives

The overall objective of this study is to explore the performance of coffee supply chains in Vietnam to facilitate the on-going development of the coffee industry in the country. Three research objectives have been established for this study:

1. Identify the actors and their respective activities, as well as the net margins generated by each supply chain participant.

2. Identify the gaps in offer quality expectations and satisfaction with the exchange among the supply chain participants.

3. Examine the nature of the relationships between the actors in coffee supply chains in the Central Highlands of Vietnam.

1.4 Vietnamese coffee industry

In Vietnam, agriculture is considered the cornerstone of economic development. Two indicators of the importance of the agriculture sector to Vietnam's economy are its contribution of more than 20% of the Gross Domestic Product (GDP) and its role in providing livelihoods to thousands of the rural population. Among the Vietnamese agricultural-product, coffee plays a significant role. Every year, coffee contribute over USD 3.4 billion export value, ranking second after rice (Tuan and Thi 2015).

The coffee tree was introduced to Vietnam by the French in the 1850s. Then, the coffee was become important after the 1980s (Ha and Shively 2008). Since then, the production of coffee has grown dramatically, making Vietnam the fourth largest exporter of coffee in the world in 1998. Currently, Vietnam is the most important

Robusta exporter in the world, sharing of 12.6% exports value (International Coffee Organisation 2015).

Coffee is largely grown in the highlands and mountainous areas, where the soil and climatic conditions are most suitable. The coffee growing areas are the red basalt soil areas in the Central Highlands (Figure 1.1) and the other provinces in the Southeast of the country. Currently, over half a million hectares are planted with coffee, of which 90 precents are in the Central Highlands. More than 560,000 small farmers cultivate coffee. Most of them are small-scale operators, and more than 53 precents have less than 1 hectare. For these small farmers, the coffee crop may account for over 95 precents of their household income (Huyen 2008).

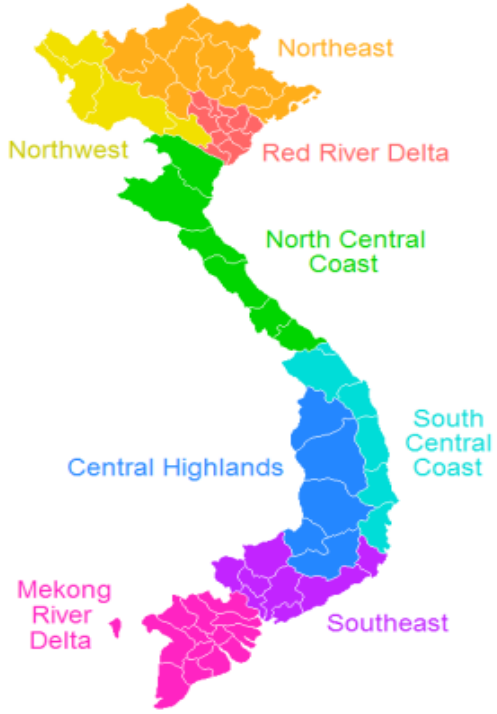

Figure 1.1: Map of regions in Vietnam

Over the last twenty years since the mid-1990s, the Vietnamese coffee industry has expanded, led by impressive success in the export markets. Currently, the country is the second largest coffee producer in the world (International Coffee Organisation 2015). The development of the coffee industry was initially driven by the National Government. They actively promoted the planting of coffee due to the conducive climatic conditions in the country and the high coffee price in the world market at

that time. Subsequently, many small farmers grew coffee and thus both the volume and the value of export coffee increased dramatically. Coffee production increased five times between 1992 and 1999, from over 140 thousand tons to over 700 thousand tons (VICOFA 2002). However, in the late 1990s, the world price of coffee collapsed (Kaplinsky 2004). The Vietnamese coffee industry faced a serious problem of over-production, and as a result, many coffee farmers and related businesses experienced significant financial hardship. Many growers even had to reduce the size of their coffee plantations (Ha and Shively 2008; ICARD 2002). The turbulent and volatile market inflicted significant challenges on coffee producers, especially on small farms, and led to the instability of the agricultural sector as a whole.

The Vietnamese coffee industry is dominated by small-sized growers. They are dependent on the global coffee market and are very vulnerable to uncertainties and risks in the coffee supply chain (Eakin, Winkels and Sendzimir 2009; Lindskog et al. 2005). They invest in coffee when the prices are high. However, in response to exceptionally low prices, farmers cut down their coffee trees and shifted land for new crops. This had a big impact on their household incomes and the other supply chain participants whom the farmers have business relationships with.

Price fluctuation is a significant issue in the world coffee market. In exporting countries such as Vietnam, unforeseen changes in prices have impact on export earnings (which contributes to the National GDP) and instability in growers' incomes (De Fontenay and Leung 2002b). This volatility makes the return of business and stakeholders unpredictable. The unpredictability of prices (as can be seen from Figure 1.2) makes it more difficult for farmers to plan, while the investments in coffee trees are long-term requirement as coffee need 3-4 years to be productive.

Figure 1.2: Robusta price in the London market

(Source: ICO 2016)

1.4.1 Coffee production in Vietnam

Numerous studies have found that most farmers tend to follow traditional farming practices and have therefore not optimised the application of their farming resources (D'haeze, Deckers, et al. 2005; De Fontenay and Leung 2002a). The local agricultural extension department in Vietnam occasionally provides free training for farmers on farm management, or to introduce the latest agriculture inputs to improve the quality of their coffee. However, having information on how to improve the quality of their yield does not necessarily mean that the farmers will apply the knowledge. There are socio-economic reasons, technical reasons as well as behavioural reasons for applying what had learned. Farmers' attitude towards risk is one reason. Lack of access to necessary inputs is another. Even if they have the ability to buy inputs, if inputs are not available, they will not be able to purchase the necessary inputs. If they are risk averse, they may want to see first that it really does work before adopting a particular farm management practice or technology. Also, due to farmers' lack of finance, they may not be able to afford the needed inputs.

The lack of resources to control coffee rust and ineffective fungicide application techniques are increasing the incidence and severity of coffee disease. In particular, the *Hemileia vastatrix* disease, which caused enormous damage to productivity and all but destroyed the coffee industry in Sri Lanka, has become endemic in all major coffee-producing countries including Vietnam (Bayman and Baker 2006; Nair 2010).

Ochratoxin A (OA) is a big disaster in coffee producing country worldwide. Vietnamese coffee contains the high level of OA contamination, also very high percentage of defective beans. In a survey of (Ilic et al. 2007) revealed that more than ninety-percent of samples which is taken for studied were positive for OA. The environmental conditions in tropical country such as Vietnam are prone to produce mycotoxins, including OA. Agricultural products such as coffee are more likely to be infected by mycotoxic fungi (Ilic et al. 2007; Taniwaki et al. 2003). Also, coffee trees are highly impact by weather, e.g., frost or drought. This is more likely to get infectious diseases that destroy the crop, hence coffee production is subject to considerable supply uncertainty.

1.4.2 Processing

After harvesting, the Robusta coffee cherries have to go through drying process, e.g., sun dry, or machine dry to produce parchment. After drying, the parchment is hulled to produce the green coffee (Le 2012).

Farmers generally use very rudimentary village-level processing methods to produce the parchment, as well as the green coffee. Consequently, downstream buyers experience problems with the consistency of taste because of differences in the farmers' harvesting and processing methods. The problems of inconsistent quality begin with the harvesting of immature cherries. As most farmers process their own coffee, there is very little consistency in this process from one farmer to the other.

Generally, coffee beans are heterogeneous (e.g., they are diversity in term of size, colour, shape or moisture content). To export the coffee, companies have to reprocess the coffee beans to meet export standards. They apply a various method to separate and improve quality grades, such as polishing, sorting and drying. Only then is the green coffee bean ready for export.

1.4.3 Distribution of coffee

Coffee is distributed through various channels. The chains are interlinked with one another and chain members have the option to trade with multiple sellers and buyers. Generally, the members of the coffee supply chains are farmers, collector agents,

traders and companies. There are no barriers to enter or withdraw from the industry, as the business activities are marked by the absence of written regulations and formal interactions.

Market intermediaries are the actors who exist between the producers and end consumers. The number of market intermediaries that are involved in a marketing channel varies depending on the nature of the product and the place of production. In the coffee supply chain, the main market intermediaries are collector agents, traders and companies.

With regards to delivery, the National Government of Vietnam began to enforce limits weight for truck in freeway routes recently. Mobile scales on freeway routes were installed to catch the trucks which overloaded as it rapidly deteriorate infrastructure. Consequently, transport costs for moving coffee from the companies to the port for export have increase. Also, uncertainty in the delivery of the product as the available of truck is limited can lead to uncertainties in relation to the total performance.

1.4.4 Markets for coffee production

Vietnam exports mainly Robusta coffee, and transact in the London International Financial Futures and Options Exchange (LIFFE). LIFFE trades Robusta coffee futures in US dollars and five ton units (International Coffee Organisation 2015). Vietnam joined the world market in the early 1990s, started trade to small regional markets such as Hong Kong and Singapore (VICOFA 2016).

Coffee is Vietnam's leading export product. Currently, Vietnam exports are 1.8 million coffee bags (Organisation 2016). As Vietnam exports mainly the Robusta variety, which is priced lower than the Arabica varieties, the share of world exports by value is about 12 percent, compared with 21 percent for Brazil, which exports mainly Arabica varieties. Approximately 92 percent of Vietnam coffee production is exported to Germany (15.5%), follow by the USA (12.17%), Belgium (10.26%), Italy (8.16%), Spain (7.02%), and Japan (5.35%) (VICOFA 2016).

Although Vietnam is the world's second largest coffee producer, production is focused on quantity rather than quality. However, consumers are demanding better quality coffee that comes with all the credence attributes like concern for the environment, worker welfare, fair trade and equity (Lewin, Giovannucci and Varangis 2004). These requirements impose additional challenges on coffee producers to meet the customers' requirements. Rapid changes and the unpredictable external business environment demand that an organisation responds quickly to sustain their competitive advantage (Gligor, Holcomb and Stank 2013; Peters et al. 2008). Organisations can no longer be isolated and independent; rather, they must be flexible and collaborative. Hence, business relationships are becoming increasingly important.

Essentially, farmers should have the capability to respond to these changes. In fact, farmers are attracted by the higher incomes available from coffee that has been certified by programs like the 4C Association, UTZ Kapex, the Rainforest Alliance, and other fair trade certification agencies (Ponte 2004; Van Loo et al. 2015). However, certification does not work for individual small farmers for many reasons. For one, the certification itself is extremely expensive for smallholders, which means they need to cooperate either with other small farms or with business enterprises. This remains a difficult task in the Vietnamese coffee industry, where 90 percent of coffee farms are run by individual smallholders.

1.5 Significance of the study

The Vietnamese coffee industry was selected for this research on the basis of its vulnerability and significance to the Vietnamese economy. It is an important industry to be studied in examining supply chain performance within the context of an uncertain business environment. Thus, this study will make a contribution to understanding supply chain performance, as well as providing potential ideas for further improvement of coffee supply chains in Vietnam.

A comprehensive study by Collis and Hussey (2014, 18) suggests that 'exploratory research is conducted into a research problem or issue when there are few or no earlier studies to which the researcher can refer for information about the issue or

problem'. In line with that (Saunders et al. 2009, 43) addressed 'an exploratory study is a valuable means of finding out what is happening, to seek new insights, to ask questions and to assess phenomena'. In particular, this study employs an exploratory design, which allows the researcher to collect qualitative data which provides an overall picture of the research problem. More analysis, specifically through quantitative data collection, is then required to explain and understand the full picture (Creswell 2013).

Using and analysing supply chain performance information to apply in the coffee industry management is not widely covered in literature. An analysis of supply chain performance provides information to examine the overall effectiveness of the supply chain; identifies improvement opportunities and evaluates the selected supply chain trading partners. Evaluating the performance of the coffee supply chain will take into account the changes required to increase the efficiency of current coffee operations as well as achieve desired development outcomes.

In dynamic business environment, e.g., high price volatility, supply there is a necessary for members in a supply chain to cooperate with each other. Thus, it is necessary to look at how the chain members in the industry manage their relationships in order to cope with uncertainty. Hakansson et al. (2009) contend that the firm's activities can be more fully understood by examining the relationships in which they are embedded. Not only is relationship building the most important resource for the firm, but it is also a source of competitive advantage (Ford and Hakansson 2013).

Numerous studies have been dedicated to deal with an uncertain and unpredictable business environment. The concept of engaging in long-term relationships is also popular. Therefore, an analysis of the relationships in an agribusiness supply chain is considered more and more important due to its dynamic business environment. The strategies that are in place to manage business relationships have been well-defined by Berry (1983). However, how Vietnamese coffee supply chain members manage their relationships is of a significant concern.

Effective relationship management is essential in achieving effective supply chain performance (Tracey, Lim and Vonderembse 2005; Lambert 2008). Yet, there is no empirical evidence to support this view in previous studies on Vietnamese agribusiness. This study attempts to fill this gap by examining the relationships between supply chain performance and relationship management within the Vietnamese coffee industry. Understanding of these relationships could help all stakeholders allocate their resources more effectively and efficiently, also assist policy-makers in designing agricultural programs achieve specific goals.

Moreover, it is desirable for the Vietnamese government to create favourable conditions which will improve coffee quality. By extension, it would allow for the coffee growers to charge higher prices for their product, thus increasing the incomes of coffee farmers. In the past, the emphasis in Vietnam has been primarily on improving production practices (VICOFA 2016). However, as consumers' needs change, it is important to reassess research and development efforts to ensure that they address the main areas that affect the performance of supply chains.

An examination of the entire coffee supply chain is important for decision-makers both internally (e.g., producers, distributors, exporters) and externally (e.g., policy-makers, investors) to identify impediments and thus to determine where resources can be best allocated. Furthermore, evaluating the performance of supply chains in Vietnam will help in the implementation of programs or projects, which will increase the level of exports, generate new employment opportunities and improve the living standards of coffee farmers in Vietnam. While many papers have been written about the subject, a localised understanding of the concept will enrich existing knowledge.

1.6 Structure of the thesis

This thesis is presented in eight chapters, as described in Figure 1.3 below. This first chapter sets the scene for the research, with a brief description of the coffee industry in terms of production, marketing and distribution in general and in the global context. The research problem and objectives have been presented, and the significance of the study established an outline the thesis structure is as follows:

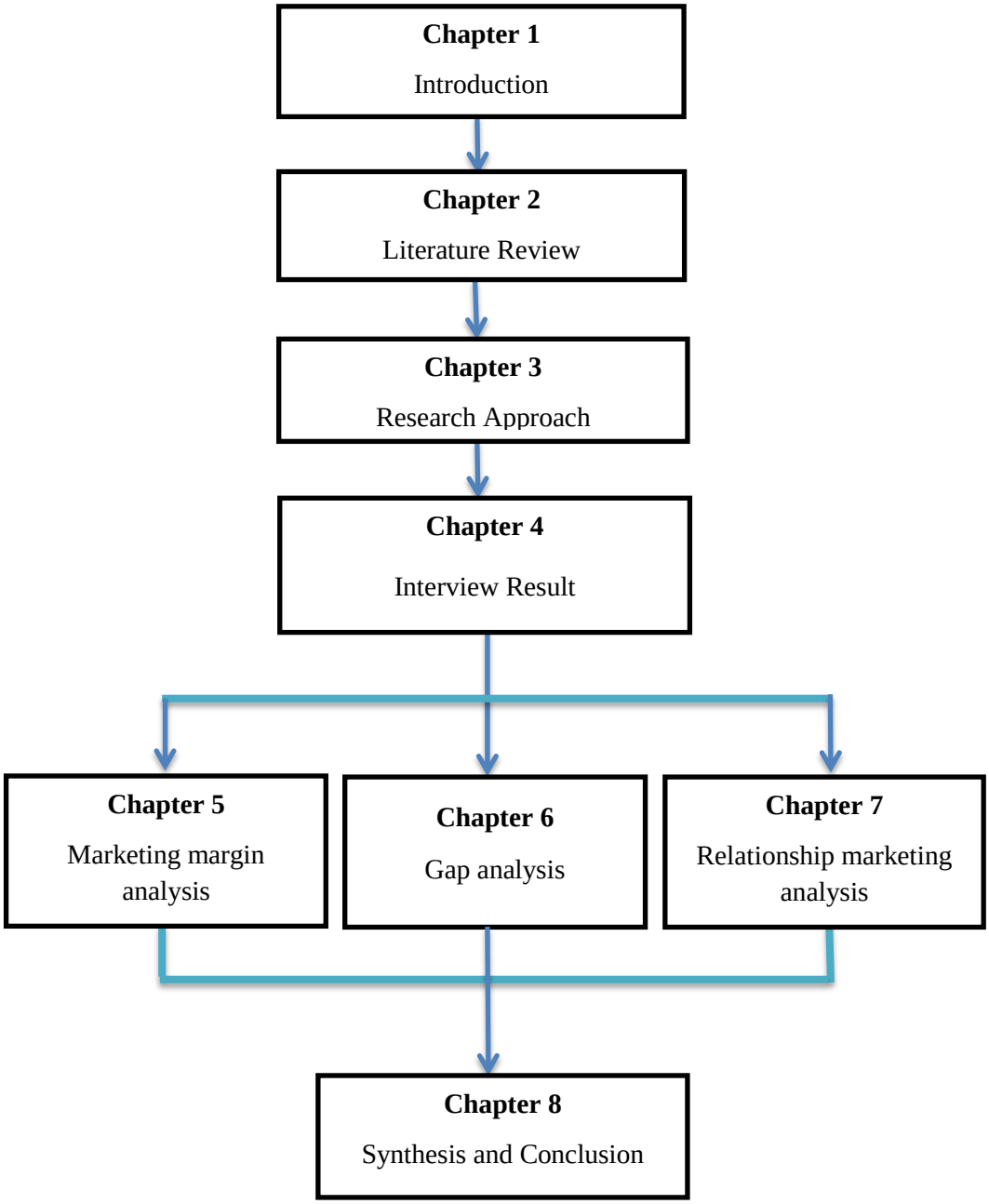

Figure 1.3: Structure of the Study

Chapter 2 reviews the literature which covers relevant theories and concepts for this study. In particular, the chapter describes the key aspects of relationship management theory, together with a discussion of significant interrelationships amongst marketing margin analysis, gap analysis and marketing relationship management.

Chapter 3 describes the research approach taken. The research paradigm discussion, research quality and quantity design, data collection procedures, questionnaire design, data preparation procedures, as well as proposed statistical analysis are discussed.

Chapter 4 reports on the preliminary research findings from semi-structured interviews with coffee growers and market intermediaries.

Chapters 5, 6 and 7 discuss the major research findings based on marketing margin analysis, gap analysis and marketing relationship management within the coffee supply chain and its implications.

Chapter 8 reviews the previous chapters, identifies limitations of the study, future research directions and addresses the contributions made by this study to the extant literature and the Vietnamese coffee industry.

In the next chapter, the extant literature will be reviewed to justify which theory is relevant for study.

CHAPTER 2
LITERATURE REVIEW

2.1 Introduction

This chapter reviews the literature on supply chain management. Section 2.2 deals with supply chain management, while section 2.3 focuses on the management of marketing activities and costs. Then, section 2.4 addresses the management of trading partners' needs and section 2.5 presents the management of relationships within the supply chain. The chapter also covers the reasons which explain the need for supply chain management and the benefits it brings to participants in the supply chain.

2.2 Supply Chain Management

Over recent decades, scholars have given considerable attention to the management of supply chains (Fawcett, Ellram and Ogden 2014; Stadtler 2015; Blanchard 2010). Performance measurement, as a fundamental management tool, identifies areas for improving performance and ensuring more effective supply chain management (Waller, Fabbe-Costes and Jahre 2008; Shepherd 2010).

Theoretically, many methods are available for measuring supply chain performance however the existing ones seldom meet the practical requirement as very complicated to apply (Blanchard 2010). Moreover, performance measurement within supply chains has not received adequate attention (Gunasekaran and Kobu 2007).

Performance measurement is an indispensable element of effective planning, as well as decision making, as it provides vital feedback information which diagnoses problems and reveals progress (Blanchard 2010; Tan 2002). In the supply chain management context, performance measurement can further facilitate understanding, as well as enhance communication and integration among the supply chain members (Giannakis 2007).

The construction of supply chain performance measures is a challenging task due to the complexity of supply chains. After acknowledging the inadequacies of traditional performance measurement systems, alternative approaches to measure the supply chain performance have since emerged (Blanchard 2010; Tan 2002).

Traditional performance measurement systems, which are largely based on financial measures, do not adequately reflect the actions which are necessary to improve the firm's performance (Shepherd and Gunter 2010).

A performance measurement system is defined as the set of indicators which reflect both the efficiency and effectiveness of actions (Neely, Gregory and Platts 1995). In the supply chain management context, performance measure is a crucial management tool in producing the desired outcomes. First, performance measurement provides information to assist in decision making based on facts. Secondly, it is a good way to communicate requirements and changes. When supply chain members know that their performance is being captured, it may encourage them to perform better. Hence, many firms use the measurement system not only to improve performance, but also to identify excellent performance. Finally, performance measurement may be the best tool to manage purchase and supply chain activities (Monczka et al. 2015).

Numerous frameworks to measure supply chain performance have been proposed (Gunasekaran and Kobu 2007; MacBryde et al. 2006; Fynes*, De Burca and Voss 2005; Fynes, Voss and de Burca 2005; Folan and Browne 2005). However, there is no one best tool to evaluate supply chain performance. The current performance measurement systems lack the following: (i) a link with strategies (Gunasekaran, Patel and McGaughey 2004); (ii) non-cost indicators (De Toni and Tonchia 2001; Beamon 1999); (iii) a balanced approach (Beamon 1999; Chan 2003); (iv) a focus on customers' needs (Beamon 1999); (v) the supply chain context (Beamon 1999) and (vi) systems thinking (Beamon 1999; Chan and Qi 2003). The integration of research and practice has also not been evident (McAdam and McCormack 2001). According to Howard, Hitchcock, and Dumarest (2000), many performance measurement systems are failing to address practical applications. There is no definite or prescriptive set of supply chain measures, hence the effectiveness of measures and

measurement systems fulfilling certain criteria need to be more thoroughly explored (Blanchard 2010).

The current study makes an effort to respond to these limitations by proposing a measurement system which can best analyse supply chain performance. The performance measurement system proposed provides assistance for performance improvement in supply chain management in terms of: (1) facilitating cooperative activities and a reduction in cost; (2) meeting trading partners' needs; and (3) the more effective management of relationships.

The importance of supply chain management in agriculture has increasingly been recognised and has also been stimulated by the need for firms to adjust in order to survive in a very competitive global business environment (Van Der Vorst 2006). Effectively managing supply chains can improve efficiency, control costs, reduce risks, provide an appropriate response to consumers' demands and satisfy consumers' expectations (Monczka et al. (2015).

Marketing an agricultural product involves various activities, e.g., buying, processing, selling and distribution. On the route from farmers to consumers, the product often changes its form and prices. The farmer's role is generally over after handing over the product to market intermediaries, who are then responsible for transporting, processing, storing and selling of the product. Market intermediaries play a significant function in moving products from the farm-gate to consumers. A supply chain consists of all the stakeholders who aim to meet customers' needs (Chopra and Meindl 2010). The main driver of supply chain management is the discovery of effective value adding practices (Fearne, Hughes and Duffy 2001).

Previous study on the coffee supply chain in Vietnam has reported a lack of appropriate storage (Hoang, Batt and Butler 2012). Coffee absorbs moisture easily; thus, without relevant storage capabilities, coffee is quickly infected by disease. In addition, it has also been reported that there is a significant variation in coffee supply, in terms of both quality and quantity, because farm management practices, such as fertiliser and chemical applications differ vastly between coffee farmers (D'haeze, Raes, et al. 2005). In other words, the provision of a consistent supply

cannot be predicted. These features of the coffee industry are some of the factors that shape the dynamics of the coffee market supply chain in Vietnam.

2.3 Marketing margin analysis - the management of marketing activities and cost

Transaction costs have been found to be important in determining the nature of vertical coordination in agricultural supply chains (Frank and Henderson 1992a; Hobbs 1997, 1996; Hobbs and Young 2001). In dynamic business environment, e.g., uncertainty of price or product quality, there is a desire for vertically integrate to avoid the problems which relation to transaction costs (Hobbs 1996). In general, transaction costs analysis aims to minimise cost and to maximise profit for each firm along the supply chain to increase market efficiency (Ferto and Szabo 2002).

Transaction cost analysis represents as one potential approach for understanding and evaluating the performance of supply chain. Transaction cost was originally introduced by Coase (1937) and developed primarily by Williamson (1979). The transaction cost theory assumes that an exchange of goods or services incur variety of costs. These costs include the costs of defining and measuring resources, acquiring information, costs associated with negotiating and enforcing contracts and the monitoring and changing of firm (Hobbs 2007; Banerjee and Chau 2004). Transaction costs are caused by market inefficiencies, which are in the form of opportunism. The players to many transaction have access to only incomplete, imperfect or imbalanced information (Claro 2004; Frauendorf 2006). While these transactions costs are typically hard to observe, they are very real (Gulati et al. 2007).

From empirical studies, it would seem that an analysis of transaction costs is not sufficient to determine the efficiency of a supply chain (Lees and Nuthall 2015b; Gong et al. 2006). Transaction costs theory is criticized for ignoring the relational elements such as the conflict which is so often inherent in transactions (Zhang and Hu 2011; Claro 2004). Gyau and Somogyi (2012) argued that reducing transaction costs in an exchange may be very efficient, but also very ineffective in providing services that satisfy customers' need.

There are costs associate with assessing a product or monitoring the actions of a buyer/seller, it is difficult to measure these costs in financial terms (Hobbs 1997) as different types of buyer-supplier relationship will involve different levels and/or types of transaction cost (Hobbs 1996). Therefore, economists have tried other ways of measuring transaction costs. There are several different approaches towards measuring the level and effects of transaction cost (Hobbs 1997; Holloway et al. 2000; Frank and Henderson 1992b; Fundira 2003; Claro 2004). According to Tanaya (2010), transaction costs are reflected in marketing margins, hence the analysis of marketing margins can be approached in a similar manner to transaction cost.

The analysis of marketing margins have been applied as a method for evaluating performance in various agriculture supply chains in many developed (Wohlgenant 2001; Zoltan Bakucs and Ferto 2006; Marsh and Brester 2004; Capps, Colin-Castillo and Hernandez 2013) and developing countries (Herlambang, Batt and McGregor 2006; Tanaya 2010; Batt 2003c).

In the developing countries, marketing margins have been most often used in evaluating the performance of supply chains because data about prices are most readily available (Tanaya 2010). Studies using marketing margin analysis can be found in the literature. Nawi (2009) explored fruit supply chains in Australia; Herlambang, Batt, and McGregor (2006) looked at the mango supply chain in Indonesia to explore the alternative marketing chains for farmers; Batt (2004) worked on potato marketing in Viet Nam to examine the performance of the potatoes supply chain in the Red River Delta in Vietnam.

The marketing margin is the difference between the price at which the customer pays and the price at which the product is resold, inclusive of all the added activities and functions performed by the market intermediary (Kohls and Uhl 2002). Marketing margins signify the value of various services including aggregation, grading, sorting, processing, packaging and transport that are added to the basic product. The amount that an actor is able to capture depends on the construction of the supply chain, e.g., the number of supply chain actors and the amount of power (control) that they are able to exercise (Recklies 2001; Martin et al. 2007). Marketing margins review the volume and flow of the product, the activities performed by each actor in the supply

chain and the costs involved to perform those activities, relative to the price received Herlambang, Batt, and McGregor (2006). Markets are considered to be efficient when the price sufficiently represents the storage and transportation costs, as well as the price differences when the product form changes (Harris-White 1995).

From the literature, an analysis of prices, marketing costs and margins will reveal unfair trading practices, market inefficiencies and constraints within the marketing chain (Herlambang, Batt and McGregor 2006). The larger the margin the market intermediaries are able to extract, the greater the inefficiencies in the marketing system; as it consequently results in no profit or even a trading loss (Mendoza and Rosegrant 1995). Marketing margins may vary due to the product's characteristic, the number of participants engaging in the transaction, the marketing services delivered, and the uncertainty and risks borne by each participant (Pomeroy and Trinidad 1995). Measuring costs and margins enables an analyst to determine the extent to which a supply chain is more efficient (decreased costs) and more effective (increased value).

2.4 Gap analysis - the management of trading partners' needs

Supply chains always operate in uncertain external environments and a reduction in uncertainty will improve the performance of a supply chain (Sun, Hsu and Hwang 2009). Traditionally, attention has been directed towards managing the uncertainty in buyer demand. However, uncertainty also occurs at the supply level (Van der Vorst and Beulens 2002). An external supplier may deliver a product whose quality is different from that what is required.

Gap analysis, developed by Parasuraman, Zeithaml, and Berry (1985), looks at the gap between what each actor wants and what each actor gets from their transaction with preferred buyers and suppliers. Gap analysis determines whether each actor performs well enough in fulfilling both its upstream and downstream partners' needs. The analysis takes into account the technical and functional qualities of the produce (Herlambang, Batt and McGregor 2006).

Technical quality describes the buyer's specifications on the physical aspects of the

product (Gronroos 1990). Concern is place on the product's size, colour, shape, freedom from pests and diseases, as well as any chemical contaminants, maturity, dryness and the way the product has been packed (Batt 2004). Functional quality identifies the manner in which a supplier delivers the product to a customer when it is required at a competitive price (Batt 2005).

When purchasing a product with the intention to resell to others, the buyer will search for the best supplier who is able to provide the desired quantity and quality at an agreed price and at an agreed time (Monczka et al. 2015). Therefore, understanding the customers' needs and aiming to satisfy those needs more effectively than competitors is very important for a supplier to succeed in such a market (Armstrong et al. 2014). The performance of the marketing system therefore, can be evaluated by the suppliers' ability to meet customers' total quality requirements. The difference between customers' expectations and what customers actually receive from their suppliers can be described as the service gap (Parasuraman, Zeithaml and Berry 1985). In reducing the gap, it is important to identify what constraints and impediments actors face when they are unable to meet the demands of their downstream customers. Understanding where the problems emerge provides an opportunity for the actors to make improvements.

Choosing effective potential suppliers contributes significantly to the success of any business. In the process of buying a product, when a firm has several alternative suppliers, its decision to purchase will be influenced by several factors. Clear standards need to be in place to achieve the objective of minimizing the risks in purchasing management such as inferior quality, poor service, as well as to maximize the overall value through competitive prices.

Earlier studies have covered a wide range of criteria for supplier selection in supply chain management (Chen, Lin and Huang 2006; Choi and Hartley 1996; Ho, Xu and Dey 2010; Kannan and Tan 2002; Pal, Gupta and Garg 2013) such as price, commitment to quality, ability to meet delivery due date, supplier reputation, or quality of service. The current study carefully selected some criteria and used them with some adjustments to best fit the needs of the firms within coffee supply chains.

In an industry where the variation in product quality and the quantity available is dependent on variable weather patterns, there is much risk and uncertainty in the exchange. To reduce the risk and to assure themselves of a more reliable supply, buyers generally prefer to transact with reputable suppliers. Choosing the right suppliers comprises much more than looking over a price list. Price, quality, delivery, as well as service, are the four major criteria that most firms use in evaluating their potential suppliers (Pal, Gupta and Garg 2013).

In defining quality, Gronroos (1990) suggested that it was necessary to distinguish between functional and technical quality. Moreover, Parasuraman (1998) suggested a third dimension, 'service quality', which is best described as the additional service a supplier is willing to provide in order to maintain buyer's loyalty. This includes variables such as technical support and advice, credit arrangements and supporting the customer's special needs. Service quality is considered as a distinguishing dimension, which often differentiates a firm from its competitors. Good service quality results in repeat transactions with existing buyers and the facilitation of new ones, including positive references, reduced costs and improved profitability (Cronin, Brady and Hult 2000; Yoon and Suh 2004).

According to Kotler (2009), when it is easy to evaluate the product offered by several alternative suppliers, the purchaser will most often select the supplier who delivers the lowest price. However, when there are a number of suppliers who offer similar product characteristics, the purchaser will use factors such as the supplier's reputation, financial health, communication and attitude to decide which supplier to select (Nawi 2009). In line with that Tanaya (2010) states buyers prefer to purchase from well-known suppliers to reduce uncertainty. Batt and Morooka (2003) suggests that when the decision entails a high degree of uncertainty, buyers can reduce the risk by adopting one of several alternative strategies including trial purchasing, purchasing in smaller quantities, or using multiple sources of supply.

However, while buyers can make estimates of product quality based on the external appearance of the product (Chamhuri and Batt 2015), few are able to evaluate the intangible or internal quality/ characteristics of the product without first consuming it. As the manner in which the product has been harvested, stored and transported can

have significant adverse effects on product quality, buyers need to be very aware. For this reason, buyers prefer to transact with preferred suppliers who have a reputation for consistently delivering superior quality products (Kwon and Suh 2004; Batt 2003a).

Monczka et al. (2015) describe preferred suppliers as those who are most able to provide quality products and services at competitive prices, with reliable delivery and who also behave in an honest and responsible manner. However, Cannon et al. (2010) warn that developing enduring long-term relationships is resource demanding and the advantages of this approach must be weighed against its drawbacks.

Theoretically, when selling a product, farmers will choose to transact with buyers who are able to pay the highest price for their products (Young and Hobbs 2002). However, Batt, Concepcion, and Digal (2006) indicates that a high price is not the only criterion to consider. Farmers also select customers based on other criteria such as prompt payment terms, the frequency and timing of delivery, buyers' demand for promotional support and other incentives, as well as the product quality required.

While buyers search for the best quality product with the least cost, some suppliers prefer to transact with preferred customers because it makes their selling decisions easier (Bensemann 2012). Assuming that the farmers grade their products before sale, most farmers will sell the premium quality products easily. However, the issue is how to deal with the inferior quality products, especially when they lack the time and capital. To overcome this problem, many farmers choose to sell to their preferred buyers without prior grading (Batt, Concepcion and Digal 2006).

Suppliers prefer to transact with buyers who have a good reputation and with whom they have dealt previously (Nawi and Batt 2011a). These considerations are very important, especially in a transaction which entails a possible risk of non-payment (Choi and Krause 2006) or in relation to the extension of credit. Other factors which suppliers take into account in choosing between alternative buyers include having reliable and timely market information, the exchange of technical information and capital, as well as secure payment facilities (Rankin, Dunne and Russell 2007).

2.5 Marketing relationship analysis - the management of relationships

In the modern business environment, relationships between trading partners change over time. A strong buyer-supplier relationship will enhance performance throughout the chain. Larson and Kulchitsky (2000) suggest that a close relationship between a buyer and a supplier results in better delivery performance by the supplier.

Understanding the buyer-seller relationships that exist can be used as a tool to analyse the performance of supply chains. As the supply chain needs to be coordinated among all the supply chain members to provide premium value to buyers, maintaining relationships with the upstream suppliers and downstream buyers is crucial in contributing to effective chain management (Tanaya 2010).

Collins and Burt (2006) contend that any business relationship provides reduced costs, increased flexibility, reduced uncertainty and/or improved profitability by increasing sales and gross margins. However, developing the right type of business relationship is very challenging for chain members. These challenges can include unbalanced power, unfair practices, lack of mutual goals and expectations, as well as lack of a proper basis for evaluating which members contribute to the firms' successful business (Lambert 2008; Arshinder, Kanda and Deshmukh 2011).

The success or failure of any business relationship is based on: trust (i.e., confidence and willingness to rely on a trading partner) (Schulze and Spiller 2006); commitment (i.e., the desire to maintain and strengthen the relationship with a trading party) (Subramani and Venkatraman 2003); communication (i.e., information and knowledge sharing) (Sheu, Rebecca Yen and Chae 2006); cooperation (i.e., the desire to work together towards a mutual goal) (Leonidou et al. 2013); satisfaction (i.e., the extent to which the party's expectations is met) (Walter et al. 2003; Essig and Amann 2009) and the restrained use of power (Batt, Concepcion and Digal 2006).

Developing a relationship between buyers and suppliers allow them to be more effective (Bendapudi and Berry 1997). By retaining relationships with trading partners, traders can reduce expenses by saving time and cost for search and

assessing new trading partners (Hakansson and Group 1982). However, the main reason customers establish relationship with suppliers is that suppliers create value (Corsaro and Snehota 2010).

Maintaining long-term relationships among trading partners provides many benefits to participants. An enduring long-term relationship can enable exchange partners access reliable market information (Hakansson and Group 1982), improve quality and performance (Roberts, Varki and Brodie 2003), a greater willingness to exchange information and share technical issues (Ford 2002) and greater loyalty (Evans and Laskin 1994; Caruana 2002). However, the ultimate benefit of a long-term relationship is the reduction in uncertainty of supply (Batt and Rexha 2000).

An understanding of how best to manage relationships with customers has become an important management tool for suppliers (Reinartz, Krafft and Hoyer 2004). Being closer to buyers, suppliers can achieve better buyer loyalty, thereby increase their sales (Kannan and Choon Tan 2006; Hald, Cordon and Vollmann 2009). Furthermore, a good relationship between suppliers and buyers can potentially exclude competitors (Essig and Amann 2009), as buyers become less sensitive to price competition. Engaging in long-term relationships enable both buyers and suppliers to plan and manage their operations better (Gelderman and Van Weele 2004), as well as to reduce exchange costs (Reinartz, Krafft and Hoyer 2004).

In the horticulture industry, transactions between buyers and suppliers are increasingly being conducted on the basis of long-standing relationships because of the characteristics of the product, the uncertainty associated with the quality and quantity of the produce (Nawi 2009), information asymmetries, power imbalances and knowledge impediments (Georgiev, Staykov and van Valkenburgh 2005).

As Pardo et al. (2006) state that the relationship itself becomes the resource that creates value. Relationships are based on mutual understanding and appreciation that another firm will contribute to the firm's success. Based on the key attributes of trust (Arnott et al. 2007; Rungtusanatham et al. 2003); satisfaction (Duffy 2008); commitment (Lees and Nuthall 2015a; Caceres and Paparoidamis 2007); communication (Larson and Kulchitsky 2000; Kasouf, Celuch and Bantham 2006;

Fischer 2013); cooperation (Pennerstorfer and Weiss 2013; Datta and Christopher 2011); and power (Ke and Wei 2008; Hingley 2005a; Batt 2003d; Handfield and Bechtel 2004; Maloni and Benton 2000b), supply chain relationships can be analysed and evaluated.

2.5.1 Trust

Any business exchange typically includes interdependence. Hence, the trader must depend on others in numerous ways to reach their goals. Trust is defined as the glue which connects buyers and suppliers in most exchange transactions (Arnott et al. 2007; Svensson 2005; Ke and Wei 2008). The existence of trust becomes more significant in an exchange, especially when uncertainty and asymmetric product information are present (Herlambang, Batt and McGregor 2006). Trust is seen as an information asset that directly decreases transaction costs (Cadilhon et al. 2003), reduces opportunism and may thus eliminate the requirement for structural control mechanisms (Achrol 1997). Trust induces desirable behaviour, reduces the need for extended formal contracts, facilitates dispute resolution and achieves a more transparent exchange of information (Sahay 2003). Wong and Sohal (2002) further suggest that having trust in the relationship partner is a foundation for relationship quality.

Trust is an important factor in the building and maintaining of quality relationships by making and keeping promises (Chen 2000). The lack of trust at any level of the supply chain is a major barrier to improving the performance of supply chain (Duffy 2005; Handfield and Bechtel 2004).

In a marketing relationship, trust has been defined as the willingness to depend on and believe in a partner's reliability and integrity (Suvanto 2012). In their study, (Anderson and Narus 1999, 45) refer to trust as "the firm's belief that another company will perform actions that will result in positive actions for the firm, as well as not take unexpected actions that would result in negative outcomes for the firm". Similarly, Cox (2004) argues that business relationships do not run in isolation, and hence, firms have to manage their relationships in various situations, resulting in different levels of trust.

The presence of trust in a relationship contributes strongly to fulfil each other's needs (Dyer and Chu 2003). Trust serves as a significant element that enables the engage participants to receive what they expect from the relationship (Fischer 2013). Trust is essential for business exchange, especially where payment is made some time after sale. Therefore, trust is viewed as an important business asset (Svensson 2005).

With a presence of trust in business partners, contractual arrangements may be reduced, hence decreasing costs and securing a competitive advantage. Trust reveals the confidence that a trading partner has in the dyadic relationship (Svensson 2005). In relationships with high levels of trust, the level of buyer satisfaction is high (Fischer 2013). Trust is also a significant factor in the facilitation of information sharing (Ghosh and Fedorowicz 2008).

In addition, trust reflects the belief that the trading partner will follow the commitment which has been made. To evaluate this ability, inference is often made to earlier exchanges with a trading partner. The considerations are made based on the party's interests, honesty, ability to keep promises, sincerity, integrity, competence, and their sense of responsibility (Kwon and Suh 2004; Batt 2003b).

To build high trust relationships, time and energy is needed. Moreover, transaction costs are lower than those required in low trust relationships. In addition, in high trust relationships, the parties are more open to share information and to believe the information they receive, they are also willing to share risks. As the trading partners learn more about each other, risk is reduced (Hald, Cordon and Vollmann 2009). When mutual trust exists, both partners are encouraged to make investments in the relationship. However, in the absence of trust in the relationship, conflict and uncertainty will arise (Buttle and Maklan 2015).

2.5.2 Satisfaction

Relational satisfaction is determined based on the overall transaction with other business parties. Satisfaction is a significant factor encouraging buyer loyalty and retention, and hence attaining high buyer satisfaction is the target of any managers. As the cost to gain a new buyer is very high and the benefit of having a loyal buyer grows with the length of the relationship, understanding buyer satisfaction is key to

achieving long-term profitability (Chiou and Droge 2006).

Marketing involves managing efficient buyer relationships through providing superior value and satisfaction (Armstrong et al. 2014). The higher the level of buyer satisfaction with the relationship, the greater the loyalty of the buyer to the firm (Caceres and Paparoidamis 2007). Kotler et al. (2014) indicate that the answer to buyer retention is buyer satisfaction. Satisfaction results in repurchase intentions and buyer loyalty (Caceres and Paparoidamis 2007). According to Buttle and Maklan (2015), improving buyer retention reduces a firm's marketing costs.

Buyer satisfaction is based on a buyer's assessment of the performance of the offer delivered (Gustafsson, Johnson and Roos 2005). Buyer satisfaction is the buyer's response to the value received from the exchange. However, buyer satisfaction is also the result of a comparison between the firm's performance and the buyer's expectations. Whenever performance matches or exceeds expectations, the buyer is either satisfied or highly satisfied. Conversely, whenever performance falls below expectations, the buyer will be dissatisfied (Armstrong et al. 2014). Fawcett, Ellram, and Ogden (2014) present that higher level of buyer satisfaction increase buyer loyalty, thus resulting in better business performance.

Relationship satisfaction has been viewed as a prerequisite for effective relationship management (Caceres and Paparoidamis 2007). Buyer satisfaction is related to three antecedents: received quality (technical and functional quality), received value (the product quality relative to the product price) and buyer's expectations (Batt 2003e). According to Gronholdt, Martensen, and Kristensen (2000) the principles of relationship marketing, positive business relationships enrich buyer satisfaction and thus improve the firms' performance.

2.5.3 Commitment

In the relationship marketing literature, commitment has been recognised as a significant aspect of any long-term relationship. According to Ritter and Geersbro (2012), commitment suggests that a buyer's sacrifices in the short-term will be reimbursed with benefits in the long run. It is expected that the long-term benefits will outweigh the short-term sacrifices.

Commitment is a vital element in achieving positive long-term relationships as it develops from trust (Wong and Sohal 2002; Caceres and Paparoidamis 2007). Commitment encourages partners to cooperate in maintaining relationship investments. Where buyers have many suppliers, they make commitments only to trustworthy partners, as commitment entails vulnerability, leaving them open to opportunism. Commitment to another party comes as relationship investments are made only when the buyer is satisfied with their transactional history (Buttle and Maklan 2015).

Commitment refers to the enduring desire to continue a relationship with a trading partner (Roberts, Varki and Brodie 2003). Wong and Sohal (2002) argue that commitment is a significant element in attaining supply chain integration and trust is a foundation in building such a commitment.

The current study borrows the concept of commitment from (Morgan and Hunt 1994, 23), who define it as "an exchange partner believing that an ongoing relationship with another is so important as to warrant maximum efforts at maintaining it; that is, the committed party believes the relationship is worth working on to ensure that it endures indefinitely".

2.5.4 Communication

Communication is fundamental to effective relationship management. Anderson, Narus and Narayandas (2009) state that communication is a significant feature for cooperative relationships, for frequent communication positively impacts on practical conflict management. Consequently, Ellram (2000) warns that poor communication is the main obstacle to successful partnerships. Carr and Kaynak (2007) indicate that higher levels of communication quality and information sharing are consequences of a more successful partnership.

Paun (1997) finds that frequent communication is one of the factors that distinguish excellent supplier relationships from average relationships. Christopher and Juttner (2000) state that effective relationship management is attained through a greater understanding of buyer requirements and improve information sharing. Thus, communication is an important factor in developing effective relationships.

Communication can be defined as an activity to share meaningful and timely information between firms, either formally or informally (Anderson, Narus and Narayandas 2009). Information sharing may be concerned about trade conditions (price, quality and quantity) or process coordination (production and logistics)(Claro and Omta 2005). Frequent and timely communication is a significant element in resolving conflict and adjusting perceptions and expectations (Morgan and Hunt 1994). Effective communication delivers appropriate information to buyers/suppliers in assisting in the evaluation of what the trading partner does, hence increasing the level of trust. Good, effective communication or effective information sharing has been recognised to positively influence the levels of trust in business relationships (Morgan and Hunt 1994; Dyer and Chu 2003).

In the business relationship, communication works as the process to encourage the transmission of information, where commitment and loyalty are also encouraged (Fiala 2005; Carr and Kaynak 2007). Communication facilitates the exchange of information that may reduce the risks perceived by any party involved in the transaction. Additionally, the presence of communication between the parties may reveal any uncertainty about a buyer's or seller's information (Gao, Sirgy and Bird 2005; Paulraj and Chen 2007). Communication facilitates interaction and adaptation by suppliers and customers. Furthermore, communication is recognised as an important factor for improving supply chain performance and achieving competitive advantage (Clements and Price 2007). Celuch, Bantham, and Kasouf (2011) describe the further benefit of communication, namely the identification of customers' needs and expectations, as well as support in conflict resolution. Effective supply chain communication among participants can thereafter increase sales and improve customer service (Agarwal and Shankar 2002).

Poor coordination among the chain members can compromise supply chain performance, even when individual chain members are operating at optimal levels (Simatupang, Wright and Sridharan 2002). Although optimal operational performance of an individual chain member is a challenge, a more difficult task is to maintain coordination among the chain members. Poor coordination occurs due to a lack of effective information sharing among the members (Lee and Whang 2000; Barratt 2004). However, sharing information, which requires a high degree of trust

among and between the supply chain partners, is a challenging task (Handfield and Nichols 2002).

2.5.5 Cooperation

Cooperation refers to situations in which firms work together to achieve mutual goals (Anderson and Narus 1990). Cooperation takes place when exchanging information which might lower product costs and improve product/process revolutions (Prahalad and Hamel 2006; Martinez Sanchez and Perez Perez 2003). As Wilkinson and Young (2002) state, all activities carried out with others following mutual interests or achieving benefits may be defined as cooperation. Researchers have used various aspects for the construction of cooperation, including sharing technical problems, reciprocity (Hakansson 1982), profit sharing, willingness to cooperate (Lees and Nuthall 2015b), value-creating exchange and mutually pre-agreed activities (Hald, Cordon and Vollmann 2009).

Cooperation is the effort to ensure reliable exchange, which is especially important in high risk business environments (Hobbs and Young 2001). Cooperation is a significant instrument to assist in supervising quality along the chain (Gibbon 2003). However, a lack of chain cooperation is common in transactions in developing countries (Van der Vorst, Tromp and Van der Zee 2009).

Cooperation is also defined as the common effort or association of persons for common benefit. Firms are moving towards greater cooperation in order to decrease information imbalances, as well as increase their ability to meet customers' requirements (Mentzer, Foggin and Golicic 2000). The result of cooperation is not only a decrease in cost in the supply chain, but also an increase in customer satisfaction. Thus, cooperative systems are able to improve supply chain performance. When the cooperation among supply chain participants increase, the cost will be decreased and the performance will be enhanced (Ellinger, Daugherty and Keller 2000). Hence, competitive advantage will be achieved (Harrison, Bosse and Phillips 2010).

To manage uncertainty effectively, the supply chain participants need to develop closer relationships (Cao and Zhang 2011; Bowersox, Closs and Stank 2003).

Cooperation supports the development of flexibility, consequently reducing risks (Hoyt and Huq 2000). The ability to establish cooperative relationships among trading partners can be viewed as a source of competitive advantage (Christopher and Juttner 2000) and value creation (Butler and Batt 2014).

Cooperation has often been confused with trust. Although trust may consequently lead to cooperative activities, trust is not a necessary element for cooperation to happen, as cooperation does not put partners at risk. Cooperation is different from trust, as trading partners can cooperate with other parties, even those they may not trust (Mayer, Davis and Schoorman 2006).

2.5.6 Power

Power plays a significant role in supply chain management. Power refers to the ability to get another person to do something that they would not otherwise have done. Power relationships exist between and within members in a supply chain (Woods 2003). In a marketing context, power is the ability to control the decision of another member (Gaski and Nevin 1985).

Many authors view power as the opposite of trust (Anderson, Narus and Narayandas 2009). However, power is not solely a negative force. In an unbalanced relationship, weaker actors will be more likely to search for alternative exchange partners. Nevertheless, even in perfectly balanced relationships, suppliers may tolerate some power imbalance, to achieve and maintain a beneficial business (Hingley 2005a). Therefore, power can be viewed as a mechanism for achieving cooperation among supply chain members.

A power imbalance in supply chains generally favours the buyer (Hingley 2005b; Cox and Chicksand 2007). Being closest to consumers, buyers have direct access to information including market, price and technology information that can be used to influence customers' choices (Olsen et al. 2014). Such a position gives the buyer the power to not only offer a stable market, competitive pricing, financial support and incentives, but also to impose penalties should the required products fail to meet the desired standards. As such, the position of the buyer enables them to control the other party, resources and activities, including improving coordination and

cooperation in the supply chain (Maloni and Benton 2000a; Hanf, Belaya and Schweickert 2012; Olsen et al. 2014). On the other hand, suppliers try to balance such power by reconstructing the existing relationship; that is, suppliers can gain more influence in the relationship by improving their technical power. Also, to reduce the dominance of customers, suppliers can restructure and strengthen their position by merging with their competitors or vertically integrating forward. Rola-Rubzen et al. (2013) state that smallholder farmers can engage in the establishment of farmer groups which results in improving their bargaining power towards their customers.

Firms seek to improve the terms and conditions of their transactions through bargaining. Stronger firms may use their bargaining power to attain favourable transaction terms, or in general, to control others to do what they would not otherwise do. Firms acknowledge the value of the products they offer and the dependencies they generate. In the negotiation process, stronger firms may exercise their power to get a bigger percentage. The exercising of power increases conflict, and reduces satisfaction. In a supply chain, power can be viewed as a mechanism for attaining cooperation or forced collaboration among chain members. However, power also impacts on the partners' expectations of the share and return from the transaction.

2.6 Chapter summary

A review of the research studies on supply chain management shows the importance for a firm and supply chain to adapt continuously to the business environment, but to do this, some measurement of supply chain performance is needed. Improving supply chain performance is not an easy task because there are several factors in each dimension that requires distinct capabilities from the supply chain members. For instance, in order to be preferred trading partners, members of the supply chain must have the ability and capability to deliver what customers prefer (Lewin, Giovannucci and Varangis 2004). This requirement is based on the belief that customers' satisfaction will lead to increased loyalty and motivate repeat-business as these are important to long-term marketing success.

The role of relationship marketing management is becoming more important today as markets have become increasingly dynamic and uncertain. The primary cause of market dynamics is the unpredicted changes in various aspects such as consumer preferences, technology, economic conditions and political situations. Moreover, globalisation has been recognized as a cause of dynamic markets (Buckley and Ghauri 2004). In dynamic business environments, engaging in long-term relationships may reduce uncertainties and help to achieve input/output stability (Batt, Concepcion and Digal 2006).

The role of relationship marketing management in Vietnamese coffee supply chains is crucial because the supply chains operate in the context of a high degree of uncertainty and the inability to enforce fair trading practices. In an environment where business activities are carried out with high risks, supply chain participants should realise that maintaining relationships with upstream suppliers and downstream customers is important. Furthermore, coordination among all supply chain members is needed to deliver premium value to customers. Gaining an understanding of the buyer-seller relationships that exist can therefore be used as a tool to analyse the performance of supply chains.

Successful relationship management is underpinned by relational elements such as satisfaction, trust, commitment, communication, cooperation and power-dependence. These elements are not independent of each other; they are related in the sense that one element can affect, or be influenced by another. For instance, frequent communication contributes positively to trust levels in business relationships (Morgan and Hunt 1994; Dyer and Chu 2003), whereas trust affects relationship commitment and encourages satisfaction (Morgan and Hunt 1994).

The research background presented in Chapter 1 provided an overall description of the Vietnamese coffee industry and its position in a global context. It also indicated that there was little or no comprehensive research on supply chain management in the coffee industry in Vietnam. The literature review in Chapter 2 covered a wide range of research and literature related to the development of supply chain management across the world, including the developing countries. On the basis of these two chapters, there is a demonstrable lack of understanding of supply chain management

principles in the Vietnamese coffee industry. This study, therefore, is designed to fill these gaps.

The next chapter will determine the research method that is best applied to move forward the knowledge of supply chain management in the coffee industry in Vietnam.

CHAPTER 3
RESEARCH METHODOLOGY

3.1 Introduction

In this chapter, the application of an appropriate methodological framework for the study is presented and justified. The chapter begins with a discussion of the research paradigm (Section 3.2), followed by Section 3.3, which explains the mixed research method used. In the next section, Section 3.4, the selection of the exploratory sequential design approach is discussed. The qualitative and quantitative research design, such as the recruitment of research participants, data collection and data analysis for these two approaches are then presented. Finally, the ethical issues are described in Section 3.7.

3.2 Research paradigm

Kuhn (1962) refers to research paradigm as the assumptions and structure which provide basic guidelines for research practitioners. In a similar vein, Guba (1990, 17) defined a paradigm as 'a basic set of beliefs that guide action'. Creswell et al. (2003) explain the meaning of research paradigms as shared beliefs in a research field and how the researcher interprets the evidence collected. Tashakkori and Teddlie (2010) state that a research paradigm is a basic set of assumptions that guide the inquiries and are directly related to the respective world view that researchers hold and employ for most of their research. The adoption of a particular research paradigm influences the way in which the world is viewed as well as the research strategies and methods selected (Bryman and Bell 2015).

Guba and Lincoln (1994) suggest four paradigms: positivism, post-positivism, critical theory and constructivism. Similarly, Creswell (2014) states that there are four paradigms and further described them as positivist, constructivist, transformative and pragmatism paradigms. Other authors propose three classifications: positivist, interpretive and critical (Neuman 2002).

To investigate a variety of factors influencing the current situation of the Vietnamese coffee supply chain, it is desirable that this study obtains specific data from a large population. This explains why the quantitative research method was used. On the other hand, a qualitative methodology was required to obtain comprehensive thoughts or opinions on specific issues related to the research topic. Consequently, a mixed methods research design was chosen as being appropriate for this study because using both quantitative and qualitative methods will produce complementary data, which aids in the interpretation and a more exhaustive examination of the different points of view on the subject, as well as achieving conclusive research outcomes for each of the research objectives.

Because mixed methods research has been selected for this study, an appropriate research paradigm that supports a mixed methods design is needed. From the viewpoints of some writers on mixed methods, 'pragmatism' is well suited to mixed methods research addressing issues in business and management research (Tashakkori and Teddlie 2010; Bazeley 2008; Johnson, Onwuegbuzie and Turner 2007; Greene and Caracelli 2003). Pragmatism is a philosophical stance emphasising actions, situations and consequences (Creswell 2009), as well as using diverse approaches and valuing both objective and subjective knowledge (Clark and Creswell 2011). Many researchers state that pragmatism offers a method for selecting methodological mixes, which can help researchers better answer many of their research questions (Tashakkori and Teddlie 2010; Johnson, Onwuegbuzie and Turner 2007; Bazeley 2008; Greene and Caracelli 2003). In addition, pragmatism focuses on the research problem and uses all the approaches available to understand the problem (Hall 2013). Tashakkori and Teddlie (2010) emphasize that it is important to focus attention on the research problem and then use pluralistic approaches to derive the knowledge about the problem.

The major aim in the current study was to understand the problems faced by the members of Vietnam coffee supply chains in order to improve supply chain performance. Therefore, pragmatism is suitable as the selected paradigm for this study, by the fact that it addresses the study’s research problems.

3.3 Research approaches

Of the three broad approaches commonly used in the Social Sciences, this study uses mixed methods research. The advantage of the mixed methods approach is that it combines both qualitative and quantitative data. Moreover, it provides a better understanding of the research problems than when using either quantitative or qualitative data on its own (Saunders and Lewis 2012; Cameron and Molina-Azorin 2011; Saunders 2011; Bazeley 2008).

Similarly, the mixed methods approach can make the most of both quantitative and qualitative approaches and offer greater validity of results. Furthermore, it joins together different aspects of the investigation (Bazeley 2008). Cameron and Molina-Azorin (2011) further specifies that the advantage of mixed methods research is that it allows researchers to facilitate the advantages and eliminate the weaknesses of each individual method: for example, the use of qualitative data to help explain the relationship between quantitative variables. Biesta (2010), however, warns that while providing complementary strengths for both methods, the mixed method can be challenging because of the need to implement two or more methodologies.

In order to collect comprehensive and meaningful data that can address the research question driving this study, a mixed methods approach has been devised that allows for the collection and analysis of both quantitative and qualitative data.

3.4 Mixed methods design

The study employed a mixed methods approach, including an extensive literature review, interviews and survey. Based on Creswell's (2014) classification of mixed methods designs, the Exploratory Sequential Design was chosen for this study as it allows researchers to collect qualitative and quantitative data in a sequence, where the qualitative data and results provide a general picture of the research problem after which, more analysis, specifically through quantitative data collection, is needed to refine, extend, or explain the general picture.

This study employed the Instrument Development Model, one of the two variants of the Exploratory Sequential Design. It began with a qualitative phase and later moved on to instrument development which concluded with a quantitative phase. According to Creswell (2014), this model is used when the intent is first to explore a problem with qualitative methods because the questions may not be known and the population may be understudied. After this initial exploration, the qualitative findings are used to build a second phase of the project. This phase may involve designing an instrument to measure the variables in the study. In this model, the emphasis of the study is usually on the second quantitative phase (Figure 3.1).

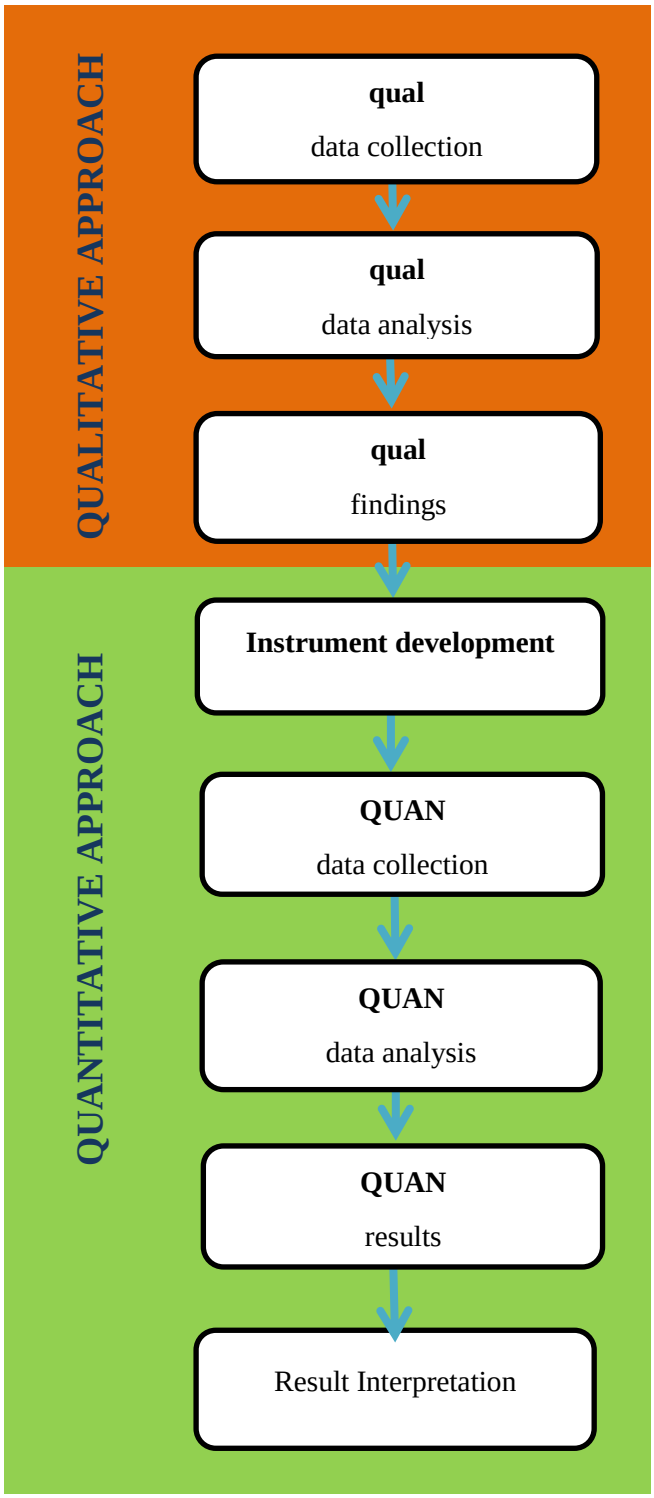

Figure 3.1: The Instrument Development Model, Exploratory Sequential Design

This study highlights how rigorous instrument development procedures can be used to connect qualitative data results to quantitative data collection. The combination of both qualitative and quantitative methods enables the researcher to collect a variety of data to ensure data accuracy and credibility, and to increase the quality of information

from the participants so as to provide a richer view. As Malhotra (2008) state, when using both methods in a single study, the two methods are not mutually exclusive and may greatly improve the quality of data collected.

3.5 Qualitative approach

This section describes the procedure of the qualitative research undertaken in detail. In the first part, the recruitment of the research participants is identified. Secondly, the method of data collection is presented. Finally, the data analysis is discussed.

3.5.1 Recruitment of research participants

The research participants were identified using the 'snowball' technique (Saunders and Lewis 2014), where one actor provides the name of another and so on. Face-to-face personal interviews were carried out with 30 farmers, 6 collector agents, 4 traders and 2 companies in the Central Highlands, Vietnam.

3.5.2 Data collection

In order to collect comprehensive and meaningful data that can address the research question driving this study, a two-phase data collection process has been devised. In Phase 1, the principle objective is to accurately describe the supply chains operating in the Vietnamese coffee industry, identify the actors, the value-added activities that they perform and the interactions between the actors (Herlambang, Batt and McGregor 2006). The actors' perceptions and expectations (Riisgaard, Bolwig, Matose, Ponte, Toit, et al. 2008) were explored.

In exploring the nature of the long-term relationships that exist in the supply chains (as many of the constructs are socially embedded) (Tanaya 2010), exploratory interviews sought to determine their meaning more clearly, thus greatly improving the accuracy of the data collected in the second phase.

Phase 1 was undertaken by conducting field visits to all parts of the supply chain, using semi-structured interviews with all the chain actors in one-on-one personal interviews (Marshall and Rossman 2014). According to Oppenheim (2000), three

main types of interviews are utilised: (i) unstructured interviews, where the interviewer only introduces the topic and then the interviewee develops his own responses with no interference. Here, the interviewee has the freedom to develop his/her own ideas; (ii) structured interviews, where there is a tight relationship between the list of questions and answers expected from the interviewee. Here, the interviewee's response is limited to the scope of the question list; and (iii) semi-structured interviews, where the interviewer has a clear list of issues to be covered. This type of interview is more flexible in terms of topic development because the interviewees are provided with room to develop their own ideas, as long as it does not divert too much from the main point. This is because semi-structured interviews provide a balance between the freedom of the interviewee to develop their own responses and the need for fixed control over the topic in a flexible manner (Saunders and Lewis 2012).

It was expected that the qualitative data obtained from these interviews would complement the quantitative data from the questionnaire, so as to provide a deeper understanding of the issues related to the research question and objectives.

3.5.3 Data analysis

The data collected during Phases 1 and 2 of this research are analysed in separate chapters in accordance with an exploratory sequential design. As the interviews were conducted in Vietnamese, all data collected were translated into English and cross checked with a bilingual academic, to ensure that the most exact meanings were maintained.

The qualitative data obtained from Phase 1 interviews were managed and organised using Microsoft Excel. In Microsoft Excel, the sheets represent the main themes; the themes themselves represent initial codes for each category. All related information derived from the text provided by the respondents is placed under each code. The coding was undertaken on the English version of the interview texts. The Vietnamese text was placed next to the codes. Words, terms and phrases were compared and contrasted between the English and Vietnamese copies to ensure accuracy in the translation.

An analysis of the qualitative data in the mixed methods research involves the coding of data, identifying of key themes, as well as accumulating and recording data under selected themes (Creswell 2014). The coding of the interview data in this study was completed prior to the categorisation into themes that reflect the primary issues of the research topic. In this way, they do not necessarily follow the content or sequence of the questions, as used during the interview. Some interviewees referred back to previous discussions or even moved ahead to address intended areas of questioning. The researcher respected any ideas or topics that were raised, and therefore did not interrupt the interviewees in these cases, although this made the task of identifying data related to particular questions more difficult. According to Marshall and Rossman (2014), the themes are identified from the interview transcripts, literature reviews and the experience of the researcher. The identification of the themes for this study was based mainly on the text of the interview transcripts. The selected themes were then compared to the standard terms commonly used in the literature review. The researcher's experience also played a minor role in selecting and modifying some terms and phrases so that they can be easily understood by both Vietnamese farmers and market intermediaries in the industry. The analysis of the interview data adhered to the selected themes, with the data then compiled and organised in Excel.

Table 3.1. Example of Coding and Interpretation Thinking

Sub-theme	Focused Coding	Initial coding	Information	Implicit meaning/ construction item
Choosing buyer	Have multiple buyers	Preferred buyer Pay on time Long-standing relationships	*"I like to sell my coffee to my preferred buyer, even sometimes he pays little lower than others, but I still like to sell to him because he pays on time and offers credit, and we have a long-term relationship".* ~Farmer	Offer an acceptable price Pay on time Offer credit Have a long-standing relationship
Choosing supplier	Have multiple suppliers	Sustainable source Quality assurance	*"I always have coffee in the store. If the trader does not supply enough coffee, I will buy coffee from collectors and farmers. It's easy to find alternative suppliers,*	It's more cost effective when buying from preferred suppliers Reliable

		Long-term relationship Preferred supplier	*especially when I am willing to pay a higher price. So if I need coffee, it's simply just paying a higher price, however the quality is not 100% sure, that's why I have to establish a long-term relationship with my preferred supplier, so I can get assurance about quality supply".* ~Company	supplier Have coffee in the desired quality Have a long-standing relationship
Relationship Management	Trust	Honest Keep promise	*"My buyer always follows the conditions he makes, so even if the market price slows down, he still pays me the same as he promises".* ~Collector agent	Follow agreement between actors
	Satisfaction	Price Quality	*"My sellers always supplies coffee with good quality at competitive price".* ~Trader	Satisfied with the transaction Meets expectation
	Commitment	Continue the relationship Do not change buyer	*"When I need money for my special needs, last time when my husband was sick, my preferred buyer was willing to help my family. I appreciate his kindness. I expect to transact with my preferred buyer in the future, and do not intend to search for an alternative buyer".* ~Farmer	Expect the relationship to continue in the future Makes effort to help me Do not intend to change my buyer
	Communication	Price Quality Quantity	*"My buyer always tells me about the market price and the quantity and quality coffee requirements".* ~Collector agent	Well-informed on price Frequent contact
	Cooperation	Work together Technical assistance	*"My buyer pays a higher price for my coffee, if I follow cultivation technique training course which my buyer provides. We will act according to what is agreed".* ~Farmer	Work together for mutual benefits Good cooperation between actors
	Power	Not control over others Not take advantage of	*"I can refuse to buy unqualified coffee, and I always pay fair price to my suppliers, even if I pay a lower price, they still sell to me as I give them credit, but I do not*	Does not take advantage of a strong bargaining position

		a strong bargaining position	*like to take advantage of a strong bargaining position".* ~Company	Exerts a strong influence over us

3.6 Quantitative approach

This section discusses the main quantitative approach which is organized into five parts. Firstly, the questionnaire design describes the construction of the questionnaire in Section 3.6.1. In the next Section, the pre-testing of the questionnaire clearly defines how the questionnaire was tested for reliability and appropriateness before it was used for the quantitative survey. The recruitment of research participants is identified in Section 3.6.3, then, the description of the data collection follows. Finally, the method of data analysis is justified.

3.6.1 Questionnaire design

A formal questionnaire was structured with a clear, easy-to-follow pattern and parallel wording for both farmers and market intermediaries. According to Saunders and Lewis (2012), the design of the questionnaire affects the response rate, as well as the reliability and validity of the data collected. The response rate, reliability and validity can be maximised by: (i) the careful design of individual questions; (ii) a clear and easy-to-follow pattern for the questionnaire; (iii) a clear and simple explanation of the purpose of the questionnaire; (iv) pilot testing; and (v) carefully planned and executed administration.

The content of the survey questionnaires were structured into four main sections (Appendix). The first section gathered general data about the respondents and their businesses, while the second part sought to collect data on the respondents' activities and the costs associated with performing those activities. The next section collected information about the respondents' perceptions and expectations regarding the offer quality received from their trading partners. Section 4 was designed to obtain information regarding the nature of the relationships that the respondents were engaged in with their preferred trading partners, with the intention of determining whether there were possibilities for better supply chain performance in the industry.

To encourage the respondents to answer the questions, a variety of response types were used. The format of the questions included yes/no questions; single choice or multiple-choice questions; Likert scales and open-ended questions.

A Likert scale was utilised for questions that required the respondents to express an opinion or to measure their attitude with a numerical score (Robson and McCartan 2016). With the Likert scale chosen, respondents' perceptions and expectations were capable of being specifically expressed and measured. It was easy for the respondents to show their level of agreement or disagreement with a variety of statements related to the topics. Bryman and Bell (2015) argue that research can use as many points on the scale as necessary, either an odd or even-numbered scale for different questions. This study used a six-point scale to avoid a neutral option, which many Asian respondents are likely to choose when answering the questions (Tanaya 2010).

In addition, a number of open-ended questions were included in the questionnaire, in order to give respondents opportunities to express their attitudes and opinions using their own words. This provided rich insights into specific areas of the study (Zikmund et al. 2012). In most cases, the open-ended questions were placed at the end of a section to provide respondents with the opportunity to reflect on issues that had not been raised in the earlier part of the survey. The data generated from the responses to the open-ended questions were categorised and quantified using the Statistical Package for the Social Sciences (SPSS).

Section 1: Respondent's details

Section 1 sought to gather some descriptive information about the respondents' characteristics which may influence their business decisions. These questions included the respondents' specific location, business size and experience in the industry. In this section, information on coffee production/sales each year, their estimate about the following year's production and the supportive information for their predictions were also investigated. Market intermediaries were asked an additional question to identify any seasonality in their sales and to identify the peak sales period.

Criteria	Literature support
Farm/business location	(Hobley 2007; Nawi 2009)
Farm size/business type	(Annan et al. 2016; Tanaya 2010)
Experience in the industry	(Annan et al. 2016; Tanaya 2010)
Amount produced/traded per year	(Hobley 2007; Nawi 2009)
Estimate production/trading for the following year	(Batt and Morooka 2003; Herlambang et al. 2006; Nawi and Batt 2011a; Nawi and Batt 2011b; Herlambang, Batt and McGregor 2006)
Peak sales period	(Batt and Morooka 2003)

Section 2: Activity and performance cost

Section 2 contained questions seeking information about respondents' activities and the costs incurred in performing those activities. This section sought to gather information that was needed for the analysis of the marketing margins of each actor in the supply chain.

After answering a number of descriptive questions in Section 1, the respondents were asked to identify their preferred buyer/supplier through the number of buyers/suppliers that they transacted with.

Criteria	Literature support
Number of buyers/ suppliers	(Hobley 2007; Nawi 2009)
Type of most preferred buyer/ supplier	(Tanaya 2010) (Categories based on results of qualitative study)
Type of second preferred buyers/ suppliers	(Nawi 2009)

Respondents were asked about the costs associated with undertaking activities, before selling to their most/second most preferred buyer or purchasing from their most/second most preferred supplier (Nawi 2009; Woods, Johnson and Hofman 2004). A set of questions related to the activity, as well as costs associated with harvesting, drying, sorting, packing, storing, transporting and loading/unloading coffee were asked (Herlambang, Batt and McGregor 2006).

Farmers were asked to indicate the amount of coffee harvested per day, how long it took and the number of people involved. Harvest losses provided a measure of production efficiency.

Criteria	Literature support
Harvest method	(Tsolakis et al. 2014; Nawi 2009; Riisgaard, Bolwig, Matose, Ponte, Du Toit, et al. 2008)
Kilograms harvested per day	

Number of people involved	(Categories based on results of qualitative study)
Labour cost (per person/ day)	

The respondents were also asked whether they used any postharvest treatments before selling/purchasing coffee. Those respondents who treated the coffee after grading were asked to indicate what chemicals they used, as well as the cost of the chemicals per kilogram.

Criteria	Literature support
Postharvest treatment	(Modified from Nawi 2009) (Categories based on results of qualitative study)
Chemical type	
Chemical cost	

Furthermore, respondents were asked whether they graded their coffee before selling to their most/second most preferred buyer or purchasing from their most/second most preferred supplier, as well as what they did with the unqualified coffee.

Criteria	Literature support
Grade coffee before sale	(Woods, Johnson and Hofman 2004; Riisgaard, Bolwig, Matose, Ponte, Du Toit, et al. 2008) (Categories based on results of qualitative study)
Using unqualified coffee	

The respondents were then asked how they packed their coffee when selling/purchasing to/from their buyers/suppliers and the costs for labour and the packing materials.

Criteria	Literature support
Material cost (thread, bag)	(Tanaya 2010) (Categories based on results of qualitative study)
Number of people involved	(Nawi and Batt 2011a; Nawi and Batt 2011b; Batt and Morooka 2003)
Labour cost (per person/ day)	(Nawi and Batt 2011a; Nawi and Batt 2011b; Batt and Morooka 2003)
Total kilogram packing per day	(Nawi 2009; Hobley 2007)

The respondents were also asked whether they stored the coffee after packing, how many days they stored the coffee, the approximate cost for this period of storage and the losses incurred during storage.

Criteria	Literature support
Store period	(Tanaya 2010) (Categories based on results of qualitative study)
Store cost	(Nawi 2009)
Percentage losses occur during store period	(Nawi and Batt 2011a; Nawi and Batt 2011b; Batt and Morooka 2003)
Main loss reasons	(Nawi and Batt 2011a; Nawi and Batt 2011b; Batt and Morooka 2003)

Those respondents, who were responsible for the delivery of coffee to/from their buyer/supplier, were asked to specify the transport cost for one kilogram to/from the buyer's/supplier's store. As different buyers/suppliers are located at varying distances, a variation in delivery costs was expected. As for the loading/unloading costs, the respondents were asked to identify who was responsible for these costs and how much they were. Transport losses were also calculated for this stage of the supply chain. This data was used to compute the total marketing costs and to calculate the net margin later on. This set of marketing costs did not explicitly measure managerial inputs or transaction costs, e.g., costs associated with gathering and assessing information of new customer/ supplier (Nawi 2009).

Criteria	Literature support
Delivery responsibility	(Nawi 2009; Herlambang, Batt and McGregor 2006) (Categories based on results of qualitative study)
Delivery cost	
Percentage losses occurred during transport	
Main loss reasons	
Loading/ unloading responsibility	
Loading/ unloading cost	

The next group of questions asked the respondents to indicate the price at which they sold/purchased coffee to/from their preferred buyers/suppliers. This data was then used to calculate the price margin.

Criteria	Literature support
Highest price (1^{st}, 2^{nd}, 3^{rd}, ungraded)	(Modified from Nawi 2009) (Categories based on results of qualitative study)
Lowest price (1^{st}, 2^{nd}, 3^{rd}, ungraded)	
Average price (1^{st}, 2^{nd}, 3^{rd}, ungraded)	

From the results of the qualitative study, there were three main grades of coffee (Grade 1, Grade 2 and Grade 3), as well as ungraded coffee. However, many farmers sold ungraded coffee. Relevant information was sought on the highest, lowest and average prices that the respondents received for the coffee they sold/purchased over the last year by grade. This also included the ungraded coffee.

Section 3: Respondents' perceptions and expectations of offer quality

In this section, gap analysis was measured from two perspectives: (i) what the respondents required from their trading partners and the extent to which their preferred trading partner was able to meet their requirements; and (ii) what the respondents believed their trading partner required and the extent to which they believed they were able to meet their preferred trading partners' needs. An efficient supply chain needs to take into consideration the technical ability and experience of the people involved, the functional quality of the produce and the credentials and experience of the business operators (Monczka et al. 2015).

The respondents were asked to indicate how well they perceived they were able to meet the needs of their most preferred buyer/supplier (Batt and Purchase 2004). The respondents were required to rate their ability to meet these same criteria on a scale of 1 (very well) to 6 (not at all well). In a subsequent open-ended question, respondents were then asked to identify what constraints prevented them from improving their offer quality.

Where the respondents were suppliers (farmers, collector agents and traders), they were asked to respond to an open-ended question to identify why they chose to transact with their most preferred buyer (Nawi 2009; Batt 2001). The suppliers were then asked to rate 14 statements, drawn from the literature and the results of the qualitative study as having some influence on the choice of alternative buyers. These statements included economic variables (price, reward for good quality, purchase all year round and payment terms, meet my immediate needs), relational variables (reputation, trustworthy, long-term relationship and frequent communication) and value-added variables (do all activities, geographically close, transport and provide market and technical information) (Batt and Morooka 2003; Nawi and Batt 2011a; Nawi and Batt

2011b). The respondents were asked to respond to each statement on a six-point Likert scale, where 1 was "very important" and 6 was "not at all important". Suppliers then rated their most preferred buyer's ability to meet their needs on a scale of 1 (very well) to 6 (not at all well). Each of the questions started with 'My most preferred buyer…'

Criteria	Literature support
purchases coffee all year round	(Nawi and Batt 2011a; Nawi and Batt 2011b; Batt and Morooka 2003)
provides me with an acceptable price	(Nawi and Batt 2011a; Nawi and Batt 2011b; Batt et al. 2006b; Batt and Morooka 2003; Young and Hobbs 2002)
pays on time	(Nawi and Batt 2011a; Nawi and Batt 2011b; Batt et al. 2006b; Batt and Morooka 2003)
rewards for good quality coffee	(Murray-Prior et al. 2007)
is trustworthy	(Batt and Morooka 2003)
has a good business reputation	(Batt, Concepcion and Digal 2006; Herlambang, Batt and McGregor 2006; Batt and Morooka 2003)
provides technical information/ advice	(Batt and Morooka 2003; Herlambang et al. 2006; Nawi and Batt 2011a; Nawi and Batt 2011b)
provides market information	(Nawi and Batt 2011a; Nawi and Batt 2011b; Batt et al. 2006b; Batt and Morooka 2003; Jari and Fraser 2009)
offers credit	(Batt and Morooka 2003; Herlambang et al. 2006; Nawi and Batt 2011b)
can transport coffee from my place	Nawi and Batt 2011b; Nawi and Batt 2011a; Gong et al. 2006; Blandon, Henson and Islam 2009; Ogunleye and Oladeji 2007)
is willing to meet my immediate needs	(Batt and Morooka 2003; Nawi and Batt 2011b; Nawi and Batt 2011a)
is geographically close to me	(Batt et al. 2006b; Herlambang et al. 2006; Nawi and Batt 2011b; Nawi and Batt 2011a)
and I have a long-standing relationship	(Batt et al. 2006b; Herlambang et al. 2006; Nawi and Batt 2011b; Nawi and Batt 2011a)
is in frequent communication with me	(Batt and Morooka 2003; Nawi and Batt 2011b; Nawi and Batt 2011a)

The respondents were then asked to indicate why their most preferred buyer was unable to meet their needs in an open-ended question (Batt 2004c).

In a similar manner, where the respondents were buyers (collector agents, traders and companies), the order of the questions was designed to seek information about their most preferred suppliers. According to Monzcka et al. (2015), customers prefer to transact with those suppliers who deliver on time and meet the quality requirements. In choosing between alternative suppliers, 19 statements were developed from Gronroos (1995) and Parasuraman (1998). The buyers were also required to rate these

19 key statements on a scale from 1 to 6, where 1 was “very important” and 6 was “not at all important”. They then rated their most preferred supplier’s ability to meet their needs as measured by these 19 statements on a scale of 1 (very well) to 6 (not at all well).

The technical quality of the coffee described the customer’s specifications for the product, specifically the desired quality, desired maturity, freedom from mechanical damage, well-graded, freedom from pest and disease infection, good-looking and stores well.

Functional quality defines the way a supplier delivers the product to the customer, such as reliable delivery, regular and stable volume, as well as meeting customer’s intermediate needs (Herlambang, Batt and McGregor 2006).

Service quality was designed to maintain a customer’s business loyalty. A supplier may wish to provide a high level of service quality by giving credit (deferred payment) or providing advance notice of impending shortages in delivery or supplying quality information on the product (Batt 2003a). Competitive prices and relational variables such as reputation, long-standing relationship, communication and attitude described the experience of the people involved (Herlambang, Batt and McGregor 2006). Each of the questions started with ‘My most preferred supplier…’

Criteria	Literature support
provides a large quantity of coffee	(Batt 2004c; Chen and Paulraj 20004; Batt and Morooka 2003; Batt and Parining 2000; Herlambang, Batt and McGregor 2006; Nawi and Batt 2011b)
is a reliable supplier	(Chen and Paulraj 2004)
has coffee in the desired quality	(Chen and Paulraj 2004; Batt and Morooka 2003; Batt and Parining 2000; Herlambang, Batt and McGregor 2006; Nawi and Batt 2011b)
has coffee that is free of pests and disease	(Batt 2004c; Herlambang, Batt and McGregor 2006; Nawi and Batt 2011b)
has coffee that is free of physical defects	(Batt 2004c; Batt and Parining 2000; Herlambang, Batt and McGregor 2006; Nawi and Batt 2011b)
has coffee that is free of foreign matter	(Batt 2004c; Batt and Parining 2000; Herlambang, Batt and McGregor 2006; Nawi and Batt 2011b)
has coffee with the desired maturity	(Nawi and Batt 2011b)
has coffee that is well-graded	(Batt 2004c; Batt and Parining 2000; Herlambang, Batt and McGregor 2006; Nawi

	and Batt 2011b)
has coffee that is good-looking	(Batt 2004c; Herlambang, Batt and McGregor 2006; Nawi and Batt 2011b)
has coffee that store well	(Batt 2004c; Nawi and Batt 2011b)
is willing to meet my intermediate needs	(Batt 2004c; Batt and Morooka 2003; Herlambang, Batt and McGregor 2006; Nawi and Batt 2011b)
has the ability to deliver coffee when required	(Batt 2004c; Chen and Paulraj 2004; Herlambang, Batt and McGregor 2006; Nawi and Batt 2011b)
has a good business reputation	(Batt 2004c; Herlambang, Batt and McGregor 2006)
provides coffee that is competitively priced	(Batt 2004c; Batt and Parining 2000; Herlambang, Batt and McGregor 2006; Nawi and Batt 2011b)
has large coffee beans	(Batt 2004c; Batt and Morooka 2003; Herlambang, Batt and McGregor 2006)
is able to give credit (deferred payment)	(Batt and Morooka 2003; Herlambang, Batt and McGregor 2006; Nawi and Batt 2011b)
and I have a long-standing relationship	(Claro 2004)
and I have a contract	(Claro and Omta 2005)
has coffee that well dried	(Batt 2004; Claro 2004)

Respondents were then asked to express what they thought about their buyer's/supplier's perception in choosing a supplier/buyer, using the same 19 statements for the buyers and the same 14 statements for the suppliers. The respondents rated these statements about their most preferred buyer's/supplier's perception on an importance scale of 1 (very important) to 6 (not at all important).

Section 4: Nature of the relationship

Section 4 was designed to collect information which sought to examine the nature of the trading relationship between respondents and their chosen supplier/customer.

The respondents were first asked to define the nature of their trading relationship with their most preferred trading partner. From the literature and results of the qualitative study, 39 prepared attributes were developed and grouped into six key themes. The strength of these relational variables was measured on a six-point scale, where 1 was "I strongly agree" and 6 was "I strongly disagree" (Batt and Miller 2004).

Trust

The presence of trust in the relationship is very important, especially in uncertain business environments (Fischer 2013). In business relationships, the level of trust was measured using eight prepared statements that sought to capture the multi-dimensional nature of the construct. Questions started with 'My most preferred buyer/supplier…'

Criteria	Literature support
I trust my most preferred buyer/ supplier	(Celuch, Bantham and Kasouf 2011; Mayer, Davis and Schoorman 2006; Caceres and Paparoidamis 2007; Kwon and Suh 2005; Benton and Maloni 2005; Fischer 2013)
*has a good reputation	(Powers, 2007;Batt 2003e, 2004c; Kwon and Suh 2004; Handfield and Bechtel 2004)
*is always honest	(Mayer, Davis and Schoorman 2006; Benton and Maloni 2005; Batt 2003e, 2004c; Kwon and Suh 2005; Batt et al. 2006a; Batt and Miller 2004; Herlambang et al. 2006)
*considers my best interests	(Caceres and Paparoidamis 2007; Benton and Maloni 2005; Batt 2003e, 2004c; Kwon 2005; Batt and Miller 2004; Batt and Parining 2000)
*keeps promises	(Kwon 2005; Celuch, Bantham and Kasouf 2011; Mayer, Davis and Schoorman 2006; Batt 2003e, 2004c; Batt et al. 2006a; Batt and Miller 2004; Batt and Parining 2000; Kwon and Suh 2005)
I believes in the information provided by *	(Li et al. 2005; Kwon 2005; Towill 1997; Herlambang et al. 2006 ; Celuch, Bantham and Kasouf 2011)
*follows the agreement between us	(Mayer, Davis and Schoorman 2006; Claro 2004)
I know my most preferred buyer/ supplier very well	(Cadilhon et al. 2003; Handfield and Bechtel 2004)

**: My most preferred buyer/supplier*

Satisfaction

Satisfaction was captured in terms of the overall appraisal of the relationship with the trading partner using measures of both economic and social satisfaction (Jiang et al. 2016). Economic satisfaction was related to the fulfilment of quality and price expectations. Social satisfaction depends on the extent to which an actor's expectations have been met by an exchange partner (Batt et al. 2006b; Herlambang, Batt and McGregor 2006). Each of the questions started with 'My most preferred buyer/ supplier…'

Criteria	Literature support
is satisfied with the transaction	(Armstrong et al. 2014; Li et al. 2005; Benton and Maloni 2005; Chiou and Dorge 2006; Batt 2003f)
is satisfied with the payment terms	(Claro 2004)
is less risky than others	(Batt 2003e, 2004c; Batt et al. 2006a; Batt and Miller 2004; Cadilhon et al. 2003; Kwon and Suh 2005; Benton and Maloni 2005)
sells/purchases at a mutually agreed price	(Batt 2003f; Blandon 2006; Claro 2004)
often meets my expectations	(Gutafsson et al 2005; Chiou and Dorge 2006 ; Batt 2003e, 2004c; Batt et al. 2006a; Batt and Miller 2004; Batt and Parining 2000)
quickly responds to my concerns	(Batt 2003e, 2004c; Batt et al. 2006a; Batt and Miller 2004; Batt and Parining 2000)
has a close personal relationship	(Batt 2003e, 2004c; Batt et al. 2006a; Batt and Parining 2000; Fischer et al. 2008; Handfield and Bechtel 2004)
has the best offer relative to the alternatives	(Batt 2003e, 2004c; Batt and Miller 2004; Batt and Parining 2000)
and I transact all year round	(Claro 2004; Duff 2005)

**: My most preferred buyer/supplier*

Commitment

Commitment is a desire to maintain the relationship into the future (Kwon 2005). Five statements were prepared to capture the temporal, attitudinal and instrumental aspects of this construct (Chen and Paulraj 2004; Hennig-Thurau et al. 2002; Kwon and Suh 2005). Questions started with 'My most preferred buyer/ supplier…'

Criteria	Literature support
*expects the relationship to continue in the future	(Li et al. 2005; Chen and Paulraj 2004; Caceres and Paparoidamis 2007; Kwon and Suh 2005; Benton and Maloni 2005; Gutafsson et al 2005; Monczka et al. 2015)
it is more cost effective to rely on my preferred buyer/ supplier, rather than to search for alternative buyer/ suppliers	(Gutafsson et al 2005; Batt 2003f; Kwon and Suh 2005)
*makes an effort to help me	(Herlambang et al. 2006; Li et al. 2005; Benton and Maloni 2005)
*does not intend to change my buyer/supplier	(Caceres and Paparoidamis 2007;Benton and Maloni 2005; Kwon 2005; Gutafsson et al 2005; Kwon and Suh 2005)
*does not break the commitment between us	(Caceres and Paparoidamis 2007; Cadilhon et al. 2006a; Schulze et al. 2008)

**: My most preferred buyer/supplier*

Communication

The quality of communication depends on the frequency and the content/kind of information exchanged (Fischer 2013). Frequent communication between and within trading partners effectively reduces uncertainty (Monczka et al. 2015; Kwon and Suh 2005) and improves coordination (Nawi and Batt 2011). Questions * started with 'My most preferred buyer/ supplier…'

Criteria	Literature support
*is well-informed on price	(Monczka et al. 2015; Li et al. 2005; Chen and Paulraj 2004; Batt et al. 2006a; Herlambang, Batt and McGregor 2006)
*frequently suggests how to improve on product quality	(Herlambang, Batt and McGregor 2006; Batt et al. 2006a; Chen and Paulraj 2004; Li et al. 2005)
*often discusses better ways to pack, grade, store and process coffee	(Chen and Paulraj 2004; Herlambang, Batt and McGregor 2006)
*is relatively easy to contact	(Batt and Miller 2004; Chen and Paulraj 2004; Li et al. 2005)
*and I have frequent contact	(Caceres and Paparoidamis 2007; Fischer 2013; Handfield and Bechtel 2004; Lambert and Cooper 2000; Kwon and Suh 2005)

Cooperation

Cooperation was evaluated using five measures that were adapted from the literature (Batt, Conception and Digal 2006a; Caceres and Paparoidamis 2007). Most * questions started with 'My most preferred buyer/ supplier…'

Criteria	Literature support
*provides financial assistance	(Batt 2003e; Batt et al. 2006a; Claro 2004; Herlambang et al. 2006)
*is well-informed on technical matters	(Caceres and Paparoidamis 2007; Kwon 2005; Batt et al. 2006a; Batt and Miller 2004; Batt and Parining 2000; Lambert and Cooper 2000)
*prefers to transact with local buyer/ suppliers	(Batt et al. 2006a; Fischer 2009)
*is willing to share the risk	(Batt 2003e; Batt et al. 2006a; Cadilhon et al. 2006b; Handfield and Bechtel 2004; Lambert and Cooper 2000)

*and I work together for mutual benefits	(Benton and Maloni 2005; Batt and Miller 2004; Claro 2004; Duffy 2005; Handfield and Bechtel 2004; Lambert and Cooper 2000)
there is a good cooperation between my buyer/ supplier and myself	(Benton and Maloni 2005; Batt 2004c; Batt et al. 2006a; Batt and Miller 2004; Fearne et al. 2001; Young and Hobbs 2002)

Power

Six measures were used to evaluate the extent to which the power in the relationships between the respondents and their preferred trading partners were equitably shared. Questions * started with 'My most preferred buyer/ supplier…'

Criteria	Literature support
*has all the power	(Batt 2003e, 2004c; Batt et al. 2006a; Batt and Miller 2004; Lambert and Cooper 2000)
*controls all the information	(Batt 2003e, 2004c; Batt et al. 2006a; Batt and Miller 2004)
*will not take advantage of a strong bargaining position (no price pressure)	(Batt 2003e; Batt and Miller 2004; Claro 2004; Duffy 2008)
*exerts a strong influence over me	(Batt 2003e; Duffy 2008)
I must to do what this buyer/ supplier says	(Batt 2003e, 2004c, Herlambang et al. 2008)
*has a right to sell/ buy or not to sell/buy the coffee	(Batt 2004c; Claro 2004; Duffy 2005, 2008)

Next, the respondents were asked to define the nature of their relationship with their second most preferred buyers/suppliers or to define the nature of their transactions with other traders (Batt 2003f; Nawi 2009). For each of the second downstream/upstream buyers/suppliers with whom the respondents transacted, the 'Most preferred buyer/supplier' was replaced with 'My second most preferred buyer/supplier', in both cased denoted by * in the table.

3.6.2 Pre-testing the questionnaire

A draft of the questionnaire was sent to six respondents for feedback regarding the contents, structure, use of terminology and the time needed to complete the questionnaire. Most feedback received were primarily suggestions for improving the wording of the questions, as well as Vietnamese language expressions. Since the

questionnaire was basically constructed in English (as the language of this study) and then later translated into Vietnamese, some expressions were not as natural, as compared to if they were initially written in Vietnamese. Most suggestions from this pre-test phase were taken on board and incorporated to ensure that all questions could be easily understood by the respondents.

Before conducting the main survey, the questionnaires were tested on 10 respondents for reliability and appropriateness. The final version of the questionnaire was then organized for the main study.

3.6.3 Recruitment of research participants

Coffee is grown in a various locations and by various farmers in the Central Highland regions. Generating a survey sample that mostly represents the diversity of coffee farmers is challenging. The study draws a sample from six of the biggest coffee growing areas (six communes) in the Central Highlands.

From the list of farmers' contacts provided by the head of the commune, a total of 37 farmers from biggest commune, and 36 farmers from each five commune were randomly selected as respondents, giving a total of 217 respondents. During the interviews with the 217 farmers, their preferred trading partners were revealed, and 100 market intermediaries who farmers indicated as their preferred trading partners were selected. In the current study, market intermediaries were selected based on a non-probability sampling method as this provides an opportunity to choose the sample purposively and to reach members of the population that are difficult to be identified. As guided by Saunders and Lewis (2012), there are two major types of sampling design: probability and non-probability sampling. Non-probability sampling is a quick and inexpensive way to obtain information. In total, 217 farmers and 100 market intermediaries (54 collector agents, 32 traders, and 14 companies) were involved in the study. Diagrammatically, the process is shown in Figure 3.2.

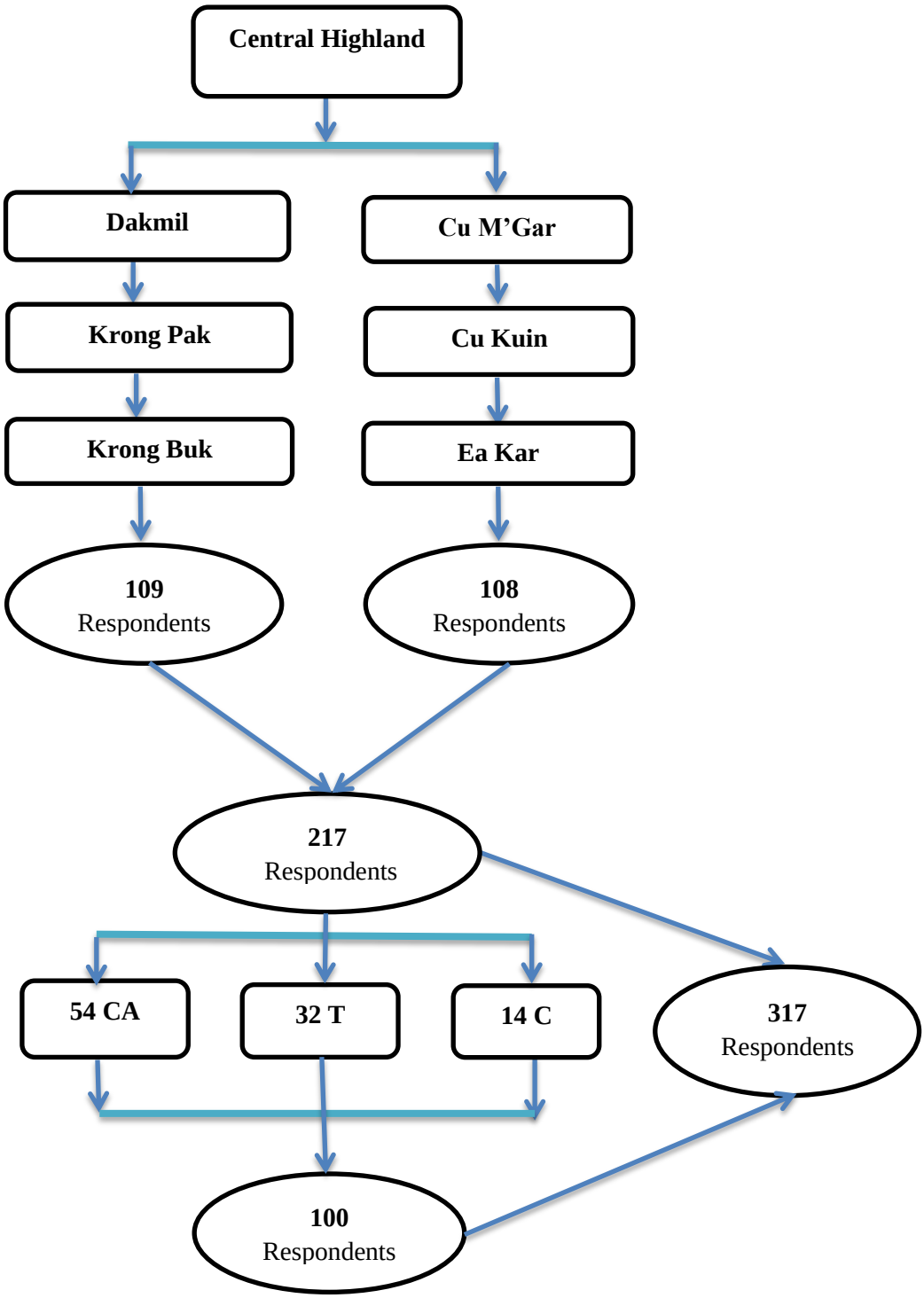

Figure 3.2: Recruitment of research participants

3.6.4 Data collection

In Phase 2, a structured questionnaire was utilised for interviewing the supply chain participants. At the beginning of the interview, two qualifying questions were asked: (1) “Have you been growing coffee for more than four years?” and (2) “Are you willing to participate in this survey?” The former question selected those respondents who will have more experience and hence have the ability to answer the questions, while the latter eliminated those respondents who were not willing to answer the questions and were more likely to fail or inadequately complete the questionnaire (Oppenheim 2000).

The interviewees were asked the same carefully constructed questions in the same order so that the researcher could facilitate comparison between participants’ answers and thereby synthesise information relevant to the research questions.

3.6.5 Data analysis

An analysis of the quantitative data obtained from the Phase 2 interviews involved multiple stages. In the first instance, to ensure questionnaire anonymity, each questionnaire was marked with an ID for the purpose of checking the accuracy of data entry. The quantitative data from the survey questionnaires were coded in a machine-readable form, so that they could be processed using the Statistical Package for the Social Sciences (SPSS). A translation of the survey questionnaires data was undertaken, while the data was manually transferred onto the SPSS spreadsheet. A Vietnamese version of the responses from the open-ended questions was placed adjacent to the English translation in a secondary column. This was created for the purpose of double-checking the translation. The responses from the open-ended questions were categorised into themes and quantified with assigned scores or numbers that were then analysed as quantitative data.

The analysis of the questionnaire data was based on quantified data outputs generated from SPSS. The analysis of some questions for simple percentage results used a nominal scale of measurement and produced frequencies in descriptive statistics run in SPSS.

Descriptive analysis

Descriptive statistics such as frequency distribution, mean, standard deviation and box plots were generated for each question, depending on the nature of the question and the type of scale employed (nominal, ordinal, interval or ratio). A small number of outliers and several extreme responses were removed as they were not considered to be representative of the population. Some of the missing data may result from the omission of these respondents. However, the missing data were screened and were found to be randomly scattered and within the range of less than five percent.

Cross-tabulations were used to identify the differences in various aspects of buying and selling among the groups, where non-metric scales were employed. Chi-square analysis was used to test the significance of the observations.

Costs and prices related to coffee marketing were extracted and the marketing margins were, thereafter, calculated. The marketing costs took into account the costs of harvesting, grading, packing, transportation, loading and unloading, as well as the postharvest losses. The primary data on cost margins required figures to be calculated on a per kilogram basis so as to provide a realistic and accurate picture of the cash flows within the supply chain.

Price margins were calculated from the difference between the selling and buying prices and the various costs of sorting, grading, packaging and transporting the produce (Kotler 2009). In particular, the price margin was calculated as follows:

Price margin = Selling price – (Buying price + Marketing costs)

Independent samples t-test

Independent sample t-tests were utilised to examine any significant differences in the importance of the buyer or supplier selection criteria and the offer quality between the participants in the coffee industry. The t-test was also used to explore any differences in the nature of the relationships between each group of respondents and their preferred trading partners.

Non-parametric test

Non-parametric tests have many advantages as they do not require specific norms regarding the distribution and the variables' quality to be compared between groups. The tests for two groups and the k-groups are different. The Mann-Whitney U test identifies whether two sampled populations are parallel in location, while the Kolmogorov-Smirnov Z test for two independent-samples is a more general test that identifies the differences in both the locations and shapes of the distribution. The Kruskal-Wallis H test was used in cases of more than two groups to identify whether several independent samples are from the same population (Fischer 2009).

One-way Analysis of Variance (ANOVA)

One-way Analysis of Variance (ANOVA) was utilised to compare the relationship constructs across all the different actors in a supply chain. A number of post-hoc procedures such as Scheffe's test and Tukey's Honestly Significant Difference (HSD) were used to examine where these differences were significant across the groups.

Paired samples t-test

The gap analysis used the paired sample t-test as a tool to test the difference between the means of two samples. This analysis sought to find any statistically significant difference in an actor's perception of what their upstream suppliers and/or downstream customers required and a subsequent self-evaluation of their ability to fulfil those perceived needs.

3.7 Ethical issues

This study conformed strictly to the principles of ethically conducted research to ensure that no potential issues were raised either during the research or after its completion. A survey schedule with an original copy of the survey questionnaire and an interview protocol with a complete list of the interview questions were submitted in accordance with the Curtin University Human Research Ethics requirements and

protocols. Ethics approval was received prior to the commencement of data collection. As described above, all research participants were fully informed about the purpose, procedures and timeline of the research, as well as the use of the data generated. All necessary documents (Information Sheet and Consent Form) were provided to the participants in both phases of the research. Furthermore, all transcripts of interviews were saved in removable hard drives and kept in secure locations. Any potentially sensitive content that was to be included in the research reports was sent to relevant interviewees for permission prior to disclosure.

3.8 Chapter summary

This chapter presented full details of the methods used for this research. The mixed methods approach was selected for this study as an appropriate method of seeking data to address the research questions and objectives. A two-phase exploratory sequential design was employed for the data collection, with priority placed on quantitative research. The data collection was conducted in two phases - qualitative data was collected in Phase 1 by means of semi-structured interviews, while quantitative data was obtained in Phase 2 by means of structured interviews. The process of data collection strictly followed Curtin University's established procedures and protocols, with regards to research ethics. Computer software in the form of Excel was used to facilitate the data entry and analysis of the qualitative data and SPSS was used to analyse the quantitative data. Finally, suitable statistical options were utilised to retrieve information suitable to the research focus.

In the next chapter the exploratory phase research findings will be reported.

CHAPTER 4
PRELIMINARY RESEARCH FINDINGS

4.1 Introduction

This chapter presents the results of the preliminary phase of the research where qualitative data were collected from interviews with farmers and market intermediaries in coffee supply chains in Central Vietnam. The purpose of these interviews was to gain knowledge of the critical issues influencing the various actors in the chain and their ability to perform the activities for which they were responsible, the factors impact on their choosing buyers or sellers, and to explore their relationship with preferred trading partners.

The chapter begins with a description of supply chain actors and their activities in Section 4.2. Section 4.3 focuses on criteria which actors used for choosing suppliers and buyers. Then, the relationships between actors and trading partners in the coffee supply chains were explored in Section 4.4. The chapter ends with a chapter summary in the last section (Section 4.5).

4.2 Supply chain actors and activities performance

This section describes the various actors participating in the value chain and the activities that they perform.

4.2.1 Supply chain actors

According to the respondents, there are four main actors operating in coffee supply chains in Central Vietnam (Figure 4.1).

- Farmers, as producers, that sell coffee as cherry soon after harvest or as green coffee beans to collector agents, traders or companies.
- Collector agents, who are market intermediaries at the commune or village level, who use their own means of transportation (such as trucks) to buy

coffee from the farmers' house or at the farm gate and then resell the coffee to traders or companies.

- Traders are those who buy coffee from numerous collector agents and have a large amount of coffee available to be resold to companies.
- Companies are those who buy coffee from farmers and various market intermediaries, reprocess the coffee and then export it overseas.

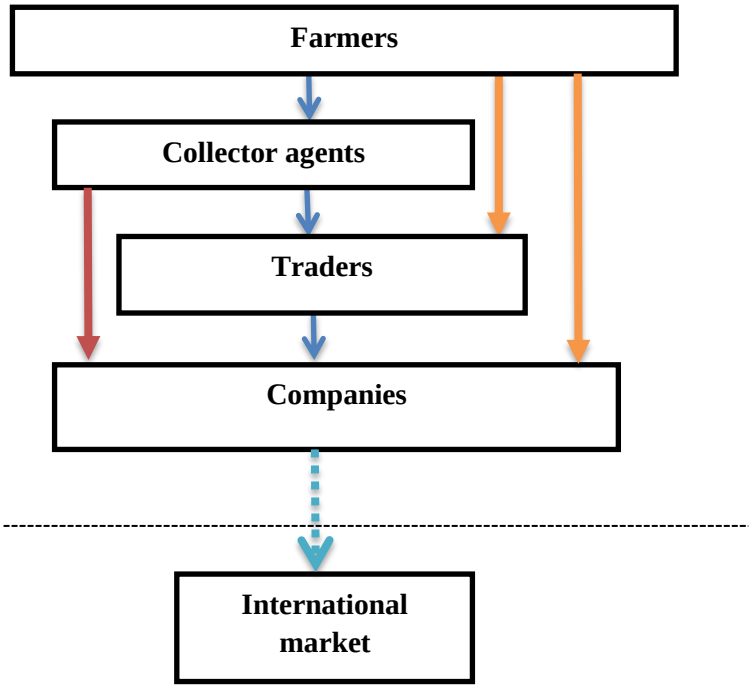

Figure 4.1: The coffee distribution channel

4.2.2 Supply chain activities performed

Harvest

Farmers harvest coffee by hand using selective picking or strip picking. With the selective harvest process, farmers pick only the ripe red cherry. Unripe (green) coffee is left on the tree for a later time. After several weeks, farmers will harvest again. This process is repeated until there is no more coffee to harvest. The coffee is strip picked, all the cherry is pulled from the tree when 70 - 80% of the coffee is ripe.

According to one respondent, more than 70% of farmers choose to strip pick because it costs less. Selective picking costs VND 1,500 (AUD 0.088) per kg whereas strip picking costs just VND 1,000 (AUD 0.058) per kg. However, with strip picking, there is much more variation in the level of maturity which results in a higher

percentage of unripe cherry, which consequently reduces the quality of green bean and the sale value of the final product, resulting in less profit for producers.

Drying

Drying of coffee after harvest is a critical stage in determining the quality of coffee. Coffee must be dried until it reaches 11-12% moisture content, and farmers reported that it takes on average around 6-8 days. Coffee is generally dried in the sun on large patios or on a drying ground.

This method is typically used among farmers in the Central Highlands because it costs less. This method has a low production cost but produces a low quality product, as the longer the coffee is dried in the sun, the more the taste deteriorates.

During cold weather, coffee takes longer to dry and some coffee beans will reabsorb moisture. These conditions encourage the growth of moulds, increasing the likelihood that the coffee may become infected with mycotoxins. Therefore, more than 60% of farmers use mechanical dryers instead of sun drying during poor weather conditions. The cost for drying coffee by machine ranges from VND 400 (AUD 0.023) to 800 (AUD 0.046) per kg

Processing

Processing at the farm level is very simple. For the dried coffee (parchment) to be converted to green bean, the skin must be removed by machine. Although the cost of processing ranges from VND 300 (AUD 0.017) to 500 (AUD 0.029) per kg at the village level, the processing techniques employed lead to variable quality and other defects in taste and presentation.

Companies who purchase coffee from farmers, collector agents or traders re-process and re-sort the coffee beans by weight, size and colour into three grades: R1, R2 and R3. However, according to the companies, some customers prefer to purchase coffee in one mixed category and to reprocess it later themselves.

Prior to export, the coffee beans are:

- *Cleaned*. This step ensures that any kind of foreign matter which might damage the customers' roasting devices is removed.

- *Sorted*. This step uses an oscillating sorting table to sort coffee beans into different quality grades. This allows the company to have a range of sizes.
- *Colour sorting*. This step sorts the coffee beans into the same colour group. Beans that are too dark are removed as they will cause the quality of the roasted coffee to decline.
- *Wet polishing*. This final step is used to make the bean look good.

Storage

Storage of coffee at the farm level can also affect coffee quality. During wet and damp conditions, the coffee can reabsorb moisture, which will lead to a loss in quality. Coffee must be stored in dry and cool conditions. Exposure to the sun or moisture will result in a rapid deterioration in quality. Storage in an appropriate place will help preserve the quality of the coffee. However, more than 90% of farmers indicated that they do not have an appropriate storage area.

Burlap bags are typically used for storing coffee beans as they allow air to flow better than plastic bags. However, more than 30% of farmers indicated that they did not use burlap bags to store coffee.

Transport

Those farmers who choose to sell to collector agents do not have to transport coffee as collector agents pick up the coffee from the farmers' house. On the other hand, those farmers who choose to sell to traders or companies have to transport their coffee from their house to the traders or company store either by motorcycle or small truck. That means that farmers who choose to transact with traders or companies must cover the cost of transport.

4.2.3 Problems in the production and marketing of coffee

Small quantity of coffee available for sale

The small size of coffee gardens is a key constraint preventing companies from achieving a sufficient quantity of good quality coffee. More than 50% of coffee producers have landholdings smaller than 1 ha. As a result, the quantity of coffee that they produce is very small. Farmers generally store coffee at home, selling it only when they need cash to meet family and social obligations.

Collector agents provide a primary consolidation function as they purchase small quantities of coffee at the farm level. The collector agent then sells the coffee to a trader who then sells the coffee to a company.

Poor harvesting and processing

Farmers generally use very rudimentary processing methods in producing parchment coffee. Downstream buyers experience problems with the quality and inconsistent taste because of the different ways in which farmers have harvested and processed the cherry. The processing is very inconsistent from individual to individual farmer. The reasons for this problem are the lack of knowledge of proper processing methods and the lack of any tangible price incentive for the production of superior quality coffee. Other factors leading to inconsistencies of quality and taste include: drying on the ground, situations leading to contamination, or incomplete drying.

Lack of inputs

Most small farmers lack of financial resources to reinvest in the crop. They always borrow money to spend in January and repay the loan when they finish harvesting coffee from October to December. While many of them receive financial support from collector agents or traders, the interest rates are very high.

Furthermore, with limited knowledge and many different kinds of fertiliser, it is easy for the farmers to become confused as to what fertiliser should be applied, when and at what rate. Over application of fertiliser not only incurs a significant cost, but may also have a detrimental impact on product quality and the environment.

Theft

In recent times there has been a marked increase in the incidence of cherry theft. This has arisen because of an increase in the number of people moving from poor provinces in the North of Vietnam. Stolen cherry is generally of poor quality as it has been strip picked and consequently contains a high percentage of under and/or over-ripe cherry. Companies who purchase poor quality cherry find it difficult to produce premium quality coffee. As a result, the lower coffee price places additional pressure

on their margins. In fear of theft, most smallholder farmers now strip pick which contributes in part to their inability to produce high quality coffee.

No incentive to improve coffee quality

Farmers who produce small amounts of high quality coffee are unlikely to be rewarded as the superior quality coffee loses its identity when it is mixed with other inferior quality coffees. Buyers expect all the bags to be the same consistent quality, which include bean size, level of defects and taste. One of the major impediments in terms of providing the right price signals to farmers is the current marketing system.

4.3 Criteria for choosing suppliers and buyers

In this section, each respondent was asked to clarify which criteria they took into consideration when choosing a preferred trading partner. In choosing a buyer, respondents used 21 criteria (Table 4.1).

Table 4.1. Criteria used in choosing buyers by farmers and market intermediaries

Criteria*	Frequency of responses	
	F (n=30)	**MI** (n=12)
Fair price/meet my requirement for price	19	4
Long-standing/good relationships	16	10
Reputation/reliable	15	4
Payment on time	13	3
Trust	12	6
Reward for good quality	10	3
Purchase all year round	8	3
Geographically close	7	2
Offer credit	6	2
Provide technical information/advice	5	1
Good communication	4	1
Share price/market information	4	1
Willing to help immediate needs	3	2
Can delivery when required	3	2
Follow purchase and sell agreement	2	3
Coordination/based on contract	2	2
No take advantage of strong bargain position	2	
Pay cash immediately and pay in full	1	
Purchase/sell large volume	1	2
Know each other/introduced by other farmers	1	1
Pay delivery cost	1	1

**Multiple responses*

The most frequently cited criteria included willingness to pay a fair price and to have a good relationship. In the absence of any legal system to enforce fair trading practices (e.g. assured payment after sale), farmers choose to transact with those buyers with whom they had built a good relationship, developed trust, had a good business reputation and usually paid on time. Some farmers preferred to transact with buyers who were geographically close.

Market intermediaries were subsequently asked to identify the criteria they used in choosing between alternative suppliers. In agriculture, the uncertainty of supply, the uncertainty of price and large seasonal variations in productivity were expected to introduce several additional dimensions to the broadly accepted models of organisational purchasing behaviour (Batt 2000). Sixteen criteria were identified (Table 4.2).

Table 4.2. Criteria used in choosing suppliers by market intermediaries

Criteria*	Frequency of responses (n=12)
Enduring relationship	9
Produce good quality coffee/right maturity/large bean/good looking	7
Competitive price/reasonable price	6
Reputation	6
Trust	5
Deferred payment/offer credit	4
Provide large volume	4
Free of physical defects	3
Free of foreign matter	3
Keep promise	3
Free of pets and diseases	3
Dryness desired	3
Well grade	2
Store well	2
Have a contract	2
Meet demand	2
Share risk	1
Good contact/inform the quality	1
Good cultivation technique	1
Geographically close	1
Place easy to access	1

**Multiple responses*

Some criteria described the overall relationship; e.g., an enduring relationship and trust whereas others reflected the dyadic nature of the relationship; e.g., sharing risk, meeting demand. Some criteria were related to the product, e.g., desired dryness,

well-graded, while others were related to the supplier; e.g., reputation or geographically close. Market intermediaries preferred to purchase from suppliers with whom they had established an enduring long-term relationship. The most critical dimension was the ability of the suppliers to produce/deliver good quality coffee. In terms of quality, buyers looked for farmers that had good cultivation skills, good looking coffee of the desired maturity, and coffee that was free from pests and diseases. Buyers expected to transact with suppliers who offered a reasonable price and were willing to accept delayed or deferred payment. To reduce uncertainty, buyers preferred to deal with suppliers who had a good business reputation. For collector agents and traders, the willingness to extend credit was an important consideration.

Suppliers generally placed more importance on receiving a high price and reducing the payment risk through establishing good relationships based on trust and a good business reputation with buyers. In contrast, buyers placed more emphasis on long-term relationships as a means of securing a reliable and continuous supply of good quality coffee.

4.4 Relationships in the coffee supply chains

Variations in product processing, different quality specifications and variations in the quantity of product available encouraged both buyers and suppliers to establish long-term relationships.

Each actor was asked to describe and explain their relationship with their preferred trading partner. Most actors described their relationship as good and positive. Six constructs were identified as the main attributes influencing the relationship between actors in the coffee supply chain using the measures developed by Batt (2003c). The measures included satisfaction, trust, commitment, communication, cooperation and power.

4.4.1 Satisfaction

Respondents reported that they were satisfied with their preferred trading partner in terms of the price received, the payment terms and the trading relationship (Table 4.3).

Table 4.3. Satisfaction attributes in the relationship dyadic

Attributes*	Frequency of responses	
	F (n=30)	**MI** (n=12)
Satisfy with the price received	12	6
On time payment	10	4
Satisfaction with my trading partner relationship	8	3
Satisfy with the transaction	7	3
Meet my expectation	5	2
Response to my concern quickly	3	2
Satisfy requirements of both partners	2	1
Provide good quality		1
Satisfy with offer		1
Buy product all year round	1	1

Multiple responses

Respondents were satisfied with their exchange partners when their expectations were meet. As one farmer stated:

I am satisfied when the buyer pays me a fair price; that is when the market price increases he pays me a higher price (Farmer 6)

Respondents had various perceptions of satisfaction which could be similar to or different from others. As another farmer stated:

I am satisfied with the technical training course offered by the company. The company meets my expectations…. and gives me the best offer compared to others (Farmer 4)

Market intermediaries tend to associate satisfaction with the response from trading partners. One company commented:

There are things that improve my satisfaction over my supplier when they respond quickly to my concern (Market intermediary 5)

I am satisfied when the coffee quality meets my quality and quantity requirements (Market intermediary 3)

4.4.2 Trust

Trust was mentioned by most farmers and market intermediaries in the interviews. In this study, trust was most often described as the business reputation that an actor had in the market. Trust was built up through an enduring, long-standing relationship, where the exchange partners understood each other and considered the other party's best interest (Table 4.4).

Table 4.4. Trust attributes in the relationship dyadic

Attributes*	Frequency of responses	
	F (n=30)	**MI** (n=12)
Loyal/ honest/ faithful relationships	13	4
Good business reputation	10	6
Pay on time	8	4
Long-standing relationships	8	4
Understand each other problem	7	3
Kept promise	5	3
Consider my interest/benefits	5	2
Follow agreement	4	2
Share information	3	1
Local people	2	1

Multiple responses

Trust was largely based on past transaction experience with exchange partners, where untrustworthy exchange partners were rejected. As one farmer stated:

I trust my trading partner because I know him very well as we are neighbour I always sell my coffee to him. There are many buyers which I can choose to transact with if he is cheating on me; but I sure he will not do that (Farmer 6)

Another farmer stated that:

I can switch to another buyer if the current buyer repeats late payment many times; even we have more than 3 years transaction relationship if the buyer is not honest I will not continue (Farmer 9)

My contract with farmers relies on trust without any formal documents… Otherwise, we cannot work together for a long time….. (Market intermediary 2)

According to respondents, trustworthy trading partners are those who are honest, have a good business reputation, always paid the agreed price on time, understood each other's problems, kept their promise, and acted in each other's best interest. One trader reported that:

I do not lend money to those I do not know well or who are not trustworthy, who I am afraid are not honest. So I have to know them, know where they live, know their ability to repay (Market intermediary 4)

4.4.3 Commitment

Commitment was most often expressed as a desire to keep the relationship with a preferred exchange partner despite alternatives being available, to follow the agreement that had been made, and not to search for other trading partners (Table 4.5).

Table 4.5. Commitment attributes in the relationship dyadic

Attributes*	Frequency of responses	
	F (n=30)	**MI** (n=12)
Continue to the relationship in the future	13	5
Follow business agreement	10	4
Do not intend to search for another trading partner	9	3
Assure payment	8	3
Willing to share risk/help each other	6	2
Depend on buyers	4	2
Do not break commitment	4	2
Continue to purchase if good quality	2	1
Continue to transact even at slightly lower price	1	1

Multiple responses

In many cases, respondents expressed a desire to continue to transact with their preferred trading partner in the future and to follow the agreement between exchange partners.

I expect my buyers and I continue to transact in the future (Market intermediary 2)

Commitment was expressed as the desire to continue to transact with trading partners and the willingness to help each other. However, an actor's commitment was expressed in different ways depending on the role they played in the chain. For

instance, farmers were committed to sell their coffee to buyers who could purchase all year round, whereas buyers were committed to purchase from suppliers who could deliver consistently good quality coffee. As one farmer expressed:

Commitment is when they keep buying from me although maybe sometimes the quality is low (Farmer 11).

Commitment is when they keep supplying the desired volume without increasing price even in shortfall periods (Market intermediary 5)

4.4.4 Communication

In the current study, most actors indicated that the majority of the communication that took place in the relationship was about the market: market prices, market trends and market preferences (Table 4.6).

Table 4.6. Communication attributes in the relationship dyadic

Attributes*	Frequency of responses	
	F (n=30)	**MI** (n=12)
Share price/market information	12	5
Frequently contact	10	4
Good communication	9	4
Easy contact	7	4
Share experience/suggest quality improvement	5	2
Share the risk	5	3
Discuss better way to pack/grade/store/process	2	2
Keep in touch	1	1
Communicate to find solution	1	1

Multiple responses

The exchange of such information was frequently conducted either face-to-face (with collector agents, or traders) or via the telephone (with companies). One intermediary reported that:

I sometimes visit farmers' farms and farmers also visit my business store (Market intermediary 7)

Respondents agreed that communication enabled them to solve problems in the supply chain and to share the risk.

Traders occupied an important role in channel communication: they forward information received from the collector agents and farmers to the company and feedback information received from companies to the collector agents and farmers. In this study, several buyers reported how they wanted the coffee. However, when asked whether buyers frequently informed farmers of the daily market price, one trader reported that:

I know I cannot require quality from farmers because I understand that the quality depends on the climate, pests and diseases, the fertiliser, or the cultivation skills… I do not tell farmers how to harvest or process the coffee because I think each farmer has different methods. Sometimes I have told some farmers but they still do it the way they like… I also do not want to inform the price at the time of coffee delivery (to my store) due to the unstable daily price in the market…. I am afraid that if the price changed, the farmer will compare the paid price with the informed price. This can make farmers unhappy and stop transacting with me (Market intermediary 8)

In general, very little information was shared between traders and farmers unless serious problems occurred such as bad quality or a small quantity. One trader reported that:

I have a close relationship with collector agents by frequently informing them the quantity I need to ensure my coffee supply. I know such information flows among buyers… (Market intermediary 10)

I have never had contact with a farmer before. If yes, I would ask them to switch to collector agents and buy coffee for me when the market is short of coffee (Market intermediary 2)

4.4.5 Cooperation

Farmers and market intermediaries referred to cooperation as the provision of financial and technical assistance. The parties had to agree on contractual conditions, where they shared a mutual interest and risk, and to work together collaboratively to generate mutual profits (Table 4.7).

From the interviews with various actors in the coffee supply chains, it was evident that there was a lack of cooperation in the supply chain.

One farmer reported that:

I have to follow company guidance on cultivation techniques as a condition of contract to ensure good quality coffee is produced and to get the corresponding rewards (Farmer 25)

Table 4.7. Cooperation attributes in the relationship dyadic

Attributes*	Frequency of responses	
	F (n=30)	MI (n=12)
Financial and technical assistance	14	5
Share the risk	10	4
Work together for mutual benefits	8	3
Share information	6	2
Help each other	4	3
Have a common goal	2	1
Based on the contract	2	1

Multiple responses

A market intermediary reported that:

I have to pay higher price (reward) for farmers if farmers follow the guidance and produce coffee to meet my requirement as I can get better price from my customers (Market intermediary 9)

4.4.6 Power

Most respondents perceived that power belonged to the people who were able to set the price (Table 4.8).

Table 4.8. Power attributes in the dyadic relationship

Attributes*	Frequency of responses	
	F (n=30)	MI (n=12)
Depend on people who set the price	12	5
Ability to influence over other partners	10	4
Depend on people who has many suppliers/buyers	7	3
Who has a strong financial support	5	2
Who sole output	4	2
Customer requirements	1	1

Multiple responses

They all believed that power belonged to whoever had the ability to influence other trading partners.

In this study, power was mentioned by one company as:

I have the right to refuse to purchase bad quality coffee from traders or any other suppliers in order to have the best coffee for my customers (Market intermediary 6)

In a similar manner, one farmer stated that:

I have the right to sell my coffee to any market intermediaries who offer the best price compared to others (Farmer 23)

4.5 Chapter summary

The preliminary results identified the actors participating in the coffee supply chain, the activities that they undertake and the personal interactions that occur between them. The key actors are farmers as growers, and market intermediaries such as collector agents, traders, and companies engaged actively in the supply chain. The key activities they undertake include harvesting, drying, processing, storage and transport.

Furthermore, the findings reveal problems in the production and marketing of coffee and clarify the relationship constructs from the different actors' perspectives. The foremost challenges faced by supply chain actors are lack of inputs, poor harvesting and processing, small quantity of coffee available for sale, increase theft, and more importantly, the lack of incentive to improve coffee quality.

The results of this chapter were subsequently utilised in the design of the main methodology and the construction of the quantitative instrument in the next phase.

The next chapter will provide more detail about the performance of actors, the activities that they undertake and the marketing margins that they are able to generate.

CHAPTER 5
ANALYSIS OF COFFEE SUPPLY CHAIN ACTIVITIES AND PRICE MARGINS GENERATED

5.1 Introduction

This chapter presents the results of the main descriptive phase interviews with the farmers and market intermediaries on the relevant activities that take place along the coffee supply chain, as well as the costs incurred by the actors in transforming and transferring the product to downstream buyers.

The chapter begins with a description of the coffee supply chain in the Central Highlands of Vietnam in Section 5.2. This will be followed by an analysis of the farmers' activities and the costs involved in Section 5.3, and then the market intermediaries' activities and costs in Section 5.4. Next, in Section 5.5, an analysis of the price and marketing margins will be performed for all supply chain participants. The chapter ends with a chapter summary in Section 5.6.

5.2 The Central Highlands coffee supply chain

The supply chain participants identified four different coffee supply chains in the Central Highlands. Coffee marketing involves four main actors: coffee farmers, collector agents, traders and companies. The farmers sell the majority of their coffee (64%) to preferred collector agents, with 27% going to the traders and 9% selling directly to companies (Table 5.1). When choosing to sell coffee to other buyers (second preferred buyers), most farmers sell firstly to the traders (51%), then to the collector agents (45%) and companies (4%) respectively.

Table 5.1. Farmer-buyer chains in the coffee industry

Supply chain dyad	Most preferred buyers		Second preferred buyers	
	n	%	N	%
Farmer – collector chain	139	64.1	22	44.9
Farmer – trader chain	59	27.2	25	51.0
Farmer – company chain	19	8.7	2	4.1
Total number of respondents	***217***	***100.0***	***49***	***100.0***

Local collector agents purchase coffee from the farmers and resell to either traders or companies. The traders purchase from farmers or collector agents, and then resell the coffee to other larger traders or companies. Most market intermediaries (100% of collector agents, 28% of traders and 21% of companies) report handling coffee that comes directly from farmers.

Companies purchase coffee from multiple suppliers to secure a sufficient quantity of coffee to meet their customers' orders. For the companies, traders are their biggest suppliers, with 35% of companies purchasing coffee from traders. However, 29% choose to purchase from collector agents, 21% purchase direct from farmers, while 14% purchase from other companies (Table 5.2).

Table 5.2. Supplier-market intermediary chains in the coffee industry

Market intermediaries	Supply chain dyad	n	%
Collector agents	Farmer – collector agent	54	100.0
	Total number of respondents	*54*	*100.0*
Traders	Farmer – trader	9	28.1
	Collector agent – trader	23	71.9
	Total number of respondents	*32*	*100.0*
Companies	Famer – company	3	21.4
	Collector agent – company	4	28.6
	Trader – company	5	35.7
	Company – company	2	14.3
	Total number of respondents	*14*	*100.0*

Local collector agents have two main downstream buyers: the traders and companies. The main customers are traders who purchase approximately 87% of the coffee collector agents' have available for sale. In turn, the traders resell more than 84% of the coffee they buy to companies (Table 5.3).

Table 5.3. Market intermediary-buyer chains in the coffee industry

Market intermediaries	Supply chain dyad	n	%
Collector agents	Collector agent – trader	47	87.0
	Collector agent– company	7	13.0
	Total number of respondents	*54*	*100.0*
Traders	Trader – trader	5	15.6
	Trader – company	27	84.4
	Total number of respondents	*32*	*100.0*

5.3 Farmers' activities and transaction cost analysis

From the information gathered during the survey, farmers undertake a variety of activities before selling their coffee to market intermediaries. Farmers who sell to traders or companies undertake more activities associated with harvesting; drying and processing, including the removal of the coffee husk and debris; sorting; packing and delivery, whereas those who sell to collector agents might sell the cherry at the farm gate immediately after harvest without any processing, or right after drying.

Of the 139 farmer respondents, all indicated that they sold their coffee to collector agents without sorting - they sell "all in". Conversely, all of the farmers who chose to sell their coffee to traders or companies sorted their coffee before making the sale (Table 5.4).

Table 5.4. Different farmer activities undertaken before selling to the different preferred buyers

Activities		Collectors		Traders		Companies	
		n	%	n	%	n	%
Harvest	Yes	139	100.0	59	100.0	19	100.0
Dry	Yes	121	87.1	59	100.0	19	100.0
	No	18	12.9	0	0	0	0
Process	Yes	110	79.1	59	100.0	19	100.0
	No	29	20.9	0	0	0	0
Sort	Yes	0	0	59	100.0	19	100.0
	No	139	100.0	0	0	0	0
Pack	Yes	0	0	59	100.0	19	100.0
	No	139	100.0	0	0	0	0
Delivery	Yes	0	0	59	100.0	19	100.0
	No	139	100.0	0	0	0	0

Farmers traditionally do not keep records of their spending on input sources or how much they receive from their sales. As a result, the costs and marketing margins

reported are calculated based on their memory. The average marketing cost per kilogram (kg) at the farm level was approximately VND 2,430 (AUD 0.14) (Table 5.5).

Differences in the costs of drying, processing and sorting coffee at the farm level are generally very small. According to the farmers, these costs depend on the quality of the coffee harvested, as poor quality coffee takes more time to sort; the type of drying; the weather; as well as the location of the drying machine. When there is a prolonged wet spell, farmers have to mechanically dry their coffee to prevent oxatoxins from developing.

Table 5.5. Farmers' average marketing costs (VND/kg)

Activities	Costs			
	n	Min	Max	Mean
Harvesting	217	1,000	1,500	1,150
Drying	199	400	800	650
Processing	188	300	500	400
Sorting	78	100	200	150
Packing	78	50	65	55
Transporting	78	80	150	90
Marketing costs	***199***	***1,930***	***3,215***	***2,495***

The average cost of harvesting per kg is around VND 1,150 (AUD 0.07) (Table 5.6). The harvesting cost ranges from VND 1,000 (AUD 0.06) to 1,500 (AUD 0.09) per kg depending on the skills of the picker; the total amount of coffee harvested; the number of people participating in the harvest; the harvesting hours; the percentage of mature coffee; the farm size; as well as the geographic location of the farm, and the method of picking employed: selective picking vs. strip picking. Strip picking reduce costs but it also reduces quality and herein is the problem why quality is so often poor.

Table 5.6. Farmers' average coffee harvesting costs (VND/kg)

Harvesting costs		n	Min	Max	Mean
Labour	Per day	217	100,000	150,000	125,000
	kilogram harvested per day	217	100	120	105
	Cost per kilogram	217	1,000	1,500	1,150
Harvesting		217	1,000	1,500	1,150

There are no differences in the type of packing farmers use when selling to different coffee buyers. Coffee is generally packed in a reused bag. Ultimately,

companies will sort and repack the coffee to meet the requirements as specified by their customers. For export, jute bags are packed with 60 kg of green bean coffee (Table 5.7).

Table 5.7. Farmers' average packing costs for the coffee before selling to their most preferred buyer (VND/kg)

Packing costs		n	Min	Max	Mean
Materials	Bag	78	2,000	4,000	2,200
	Nylon strings	78	18,000	20,000	19,000
	Cost per kilogram	78	33	40	35
Labour	Per day	78	100,000	150,000	120,000
	Cost per kilogram	78	17	25	22
Packing cost		78	50	65	55

At the farm level, the cost of packing materials varies from VND 2,000 (AUD 0.12) to 4,000 (AUD 0.24) per kg. More specifically, the cost of the bag depends on how many kg of coffee is put into the bag. Normally, farmers will pack between 60 to 70 kg of coffee in a bag. The cost of the nylon strings vary from VND 18,000 (AUD 1.06) to 20,000 (AUD 1.18) per kg of string, with 1 kg providing enough to pack up to 100 bags. Some farmers reported that traders provided the bags for them, while others had to purchase the bags themselves. The labour cost for packing varied from VND 100,000 (AUD 5.88) to 150,000 (AUD 8.82) per day, for packing up to 100 bags. As most farmers pack their own coffee, they can save on the additional labour cost. In total, the average cost of packing per kg of coffee ranges from VND 50 (AUD 0.003) to 65 (AUD 0.004).

Transport costs are high and variable, depending on whom the farmers choose to sell their coffee to and the means of transport utilised. The transport cost per kg of coffee varies from VND 50 (AUD 0.003) to 150 (AUD 0.009). The average transport cost per kg varies from VND 50 (AUD 0.003) to 100 (AUD 0.006) when selling to traders and from VND 100 (AUD 0.006) to 150 (AUD 0.009) when selling to companies. Most farmers who sold to collector agents indicated that the collector agents were responsible for the transport costs. As such, farmers do not have to pay for any transport cost when selling to collector agents (Table 5.8).

Table 5.8. Farmers' average transport costs to their most preferred buyers (VND/kg)

Most preferred buyers	Cost			
	n	Min	Max	Mean
Collector	139	0	0	0
Trader	59	50	100	80
Company	19	100	150	130
Transport cost	***78***	***0***	***150***	***100***

The farmers' marketing costs in selling to different market intermediaries varies as shown in Table 5.9 below.

Table 5.9. Farmers' average marketing costs before selling to different preferred buyers (VND/kg)

Activities	Average costs		
	Collector agents	Traders	Companies
Harvesting	1,150	1,150	1,150
Drying	650	650	650
Processing	400	400	400
Sorting		105	135
Packing		55	55
Transporting		70	120
Marketing cost	***2,200***	***2,430***	***2,510***

Farmers who sell to collector agents have lower costs of marketing because collector agents purchase ungraded coffee and collect the coffee from the farmers' house. However, for those farmers who choose to undertake all the activities associated with drying, processing, sorting, packing and delivery, the additional costs of marketing are minimal. The most significant additional cost is sorting. Delivery costs vary, depending on the location of the buyers with which the farmer has chosen to transact with. Those selling to traders spend less for delivery (VND 70/kg) (AUD 0.004/kg) compared to those selling to companies (VND 120/kg) (AUD 0.007/kg).

At the farm level, some losses and wastes occur at the various stages of harvesting, after harvesting, drying, processing, sorting and transporting of the coffee. The total losses are about 9%. Farmers indicated that most post-harvest losses occur in the harvesting and drying stage, with relatively fewer losses occurring during transport. The average loss at harvesting is 2.3%; at sorting, some 1.5% of the coffee that is harvested is discarded; and around 1% of the harvested coffee fails to reach the market (Table 5.10).

Table 5.10. The average percentage of losses at the farm level

Activities	n	Min	Max	Mean
Harvesting	217	2.0	2.9	2.3
Drying	199	1.8	2.2	2.0
Processing	188	1.5	2.0	1.7
Sorting	13	1.4	1.7	1.5
Transporting	78	1.3	1.7	1.4
Post-harvest losses	**217**	**8.0**	**9.4**	**8.9**

The main reasons for harvest losses include low inputs (58%); unfavourable weather (53%); lack of water (31%); a long rainy period when the tree is in blossom (23%); rust (23%); as well as pest and disease damage (17%) (Table 5.11).

Table 5.11. Main reasons for harvest losses at the farm level

Reasons*	Frequency (n=217)	%
Low inputs	125	57.6
Unfavourable weather	85	53.0
Lack of water	67	30.9
Long rain period when the tree is in the blossom stage	51	23.5
Rust	48	22.1
Pest and disease damage	37	17.1
Red leaf spot	32	14.7
Low rainfall	28	12.9
Poor quality	19	8.8
Broken bean	16	7.4
Deteriorated land	9	4.1
Harvest immaturity	8	3.7
Root rot	6	2.8
Old tree	5	2.3
Long high temperature period	5	2.3

**Multiple responses*

At the farm level, the main reasons for loss were attributed to high temperatures (59%) and the long transport distance (40%). Bad weather conditions (30%) were the major reason causing losses during transport by truck. (Table 5.12).

Table 5.12. Losses in transport at the farm level

Reasons*	n=78	%
The high temperature	46	58.9
Long distance/ Long time transport	31	39.7
Bad weather condition	24	30.1
Do not pay attention	10	12.8
Losses were so little	5	6.4

**Multiple responses*

5.4 Market intermediaries' activities and marketing cost analysis

This section provides insights into the activities market intermediaries' perform and the costs that they bear. Firstly, the collector agents and their marketing costs are described in the Section 5.4.1. Secondly, the traders and their marketing costs are analysed in the Section 5.4.2. Companies and their costs are then discussed in the subsequent section.

5.4.1 Collector agents' activities and marketing cost analysis

Of the 54 collector agents interviewed, 26% of the respondents were responsible for drying and processing the coffee that they purchased, whereas neither the traders nor companies were responsible for performing this activity (Table 5.13).

Table 5.13. Activities that the collector agents engaged in after purchasing from their preferred suppliers

Activities		n	Percentage
Harvest	No	54	100.0
Dry	Yes	14	25.9
	No	40	74.1
Process	Yes	10	18.5
	No	44	81.5
Sorting	Yes	49	90.7
	No	5	9.3
Pack	Yes	54	100.0
	No	0	0
Delivery	Yes	54	100.0
	No	0	0

Collector agents purchase over 60% of the farmers' coffee. Big communes generally have a group of collector agents who purchase coffee from the farmers. The collector agents gain their margin mainly from primary processing: removing debris and extraneous matter, drying and sorting. The key task of the collector agents, however, is to transport the coffee from the farmers to traders or companies.

Collector agents collect coffee from the farmers' house. There are two costs involved: one in collecting the coffee from farmers and a second in delivering coffee (after processing) to traders and companies. Collection from the farm house is from VND 20 (AUD 0.001) to 40 (AUD 0.002) per kg, but delivery cost is VND 40 (AUD

0.002) to 70 (AUD 0.004) per kg. The total transport costs are from VND 60 (AUD 0.003) to 110 (AUD 0.006) per kg.

The average estimated marketing cost incurred by collector agents is VND 185 (AUD 0.011) per kg (Table 5.14).

Table 5.14. Collector agents' average marketing costs (VND/kg)

Activities	Collector agents			
	n	Min	Max	Mean
Redrying	54	0	40	20
Sorting	54	40	60	50
Packing	54	30	40	35
Collecting from farmers	54	20	40	30
Delivery to buyers	54	40	70	50
Marketing costs	***54***	***130***	***250***	***185***

There are differences in the marketing costs of collector agents when they sell coffee to different downstream buyers. Collector agents incur a higher marketing cost when selling to companies (VND 220 (AUD 0.013) per kg), in comparison to traders (VND 125 (AUD 0.007) per kg) (Table 5 .15).

Table 5.15. Collector agents' average marketing costs when selling to their most preferred buyers (VND/kg)

Downstream Buyers	Average costs				
	Re-dry	Sort	Pack	Transport	Marketing cost
Trader		40	40	45	125
Company	40	60	50	70	220

The marketing costs incurred by the collector agents include the cost of re-drying, sorting, packing and transporting coffee to their downstream buyers. The cost of sorting is highest when selling to companies (VND 70 (AUD 0.004)) as their requirements are higher. Another reason for the high cost when selling to companies is the high cost of transport as the companies are located further away.

Collector agents report losses of up to 4% in total. They experience losses in several ways. The main loss is after sorting at 1.8%, followed by loss after re-drying and transporting at 1.1% (Table 5.16).

Table 5.16. The average percentage of losses at the collector agent level

Activities	Collector agents			
	N	Min	Max	Mean
Re-dry	32	0.9	1.3	1.1
Sort	32	1.3	2.0	1.8
Transport	32	1.0	1.2	1.1
Percentage of losses	***32***	***3.2***	***4.2***	***3.9***

Most of the losses at the collector agent level are due to poor quality (55%); small bean size (46%); failure to meet customers' requirements (26%); pest and disease problems (17%); and inappropriate maturity (13%) (Table 5.17). The high rate of black and broken coffee (11%) and physical damage by the coffee dryer (6%) are common problems for the collector agents.

Table 5.17. Factors contributing to the losses at the collector agent level

Factors*	Collector agents	
	n=54	%
Poor quality	30	55.5
Small bean size	23	42.6
Failure to meet the customers' requirements	14	25.9
Pest and disease problems	9	16.7
Inappropriate maturity	7	13.0
High rate of black and broken coffee	6	11.1
Physical damage by processing/ dryer machine	3	5.5

**Multiple responses*

At the collector agent level, 52% report that when farmers supply poor quality coffee, they make some deduction from the payment to compensate for the low selling price. Poor quality coffee is usually sold to local retailers at a cheaper price to make soluble instant coffee powder.

When the coffee is transported from the collector agent to their customers, the main reasons for any losses are high temperature at the time of transport (54%); poor quality coffee (33%); as well as pest and disease problems (17%). Coffee being packed in unsuitable bags (6%); overloading trucks (11%) and transport during adverse weather conditions (7%) may also contribute to losses at the collector agent level (Table 5.18).

Table 5.18. Factors in transport losses at the collector agent level

Factors	Collectors	
	n	%
High temperature	29	53.7
Poor quality	18	33.3

Pest and disease damage	9	16.7
Transport too much/ Overloading	6	11.1
Unfavourable weather	4	7.4
Not suitable bag	3	5.5

**Multiple responses*

5.4.2 Traders' activities and marketing cost analysis

From the 32 traders who participated in the study, more than 90% of the respondents were responsible for re-drying and re-sorting the coffee they had purchased (Table 5.19).

Table 5.19. Activities traders engaged in after purchasing from their preferred suppliers

Activities		n	Percentage
Re-drying	Yes	29	90.1
	No	3	9.9
Re-sorting	Yes	32	100.0
	No	0	0
Packing	Yes	32	100.0
	No	0	0
Transporting	Yes	32	100.0
	No	0	0

The traders gain their margins mainly from re-drying and re-sorting the coffee they have purchased. The other key task of the traders, however, is to transport the coffee from the collector agents and from their own premises to the companies.

In this study, 27% of the coffee harvested was sold directly to the traders. Deals were made in cash, but in most cases, payment was made one to two weeks after delivery. At the trader level, the average marketing cost was VND 225 (AUD 0.013) per kg (Table 5.20).

Table 5.20. Traders' average marketing costs (VND/kg)

Activities	Traders			
	n	Min	Max	Mean
Re-dry	32	30	60	40
Re-sort	32	50	120	90
Pack	32	30	50	40
Delivery to buyers	32	40	80	65
Marketing costs	***32***	***150***	***310***	***225***

Traders' costs include re-drying, re-sorting, packing materials, repacking costs and transport costs to deliver to their downstream customers. These costs varied from trader to trader, with a minimum of VND 150 (AUD 0.008) per kg and a maximum of VND 310 (AUD 0.018) per kg. Some traders reported that they provide bags for their suppliers, whereas others did not. However, on average, traders spend from VND 30 (AUD 0.002) to 50 (AUD 0.003) per kg to repack the coffee. To deliver the coffee to their customers, the average cost of transport was VND 65 (AUD 0.004) per kg.

When examining the marketing costs that traders incur when purchasing coffee from collector agents and traders there is a marked difference in the marketing costs due to the different activities that may or may not have been undertaken. Traders incurred a higher marketing cost when purchasing from farmers (VND 220/kg) (AUD 0.013/kg) in comparison to purchasing from collector agents (VND 140/kg) (AUD 0.008) as the coffee from farmers was of lower quality which needed more work on drying and sorting (Table 5.21).

Table 5.21. Traders' average marketing costs when purchasing from their most preferred suppliers (VND/kg)

Upstream Suppliers	**Average costs**				
	Re-dry	Re-sort	Pack	Transport	Marketing cost
Farmers	60	120	40		220
Collector agents	30	80	30		140

Looking at the marketing costs traders incurred when they sold coffee to downstream buyers, traders incurred a higher cost when selling to other larger traders (VND 240/kg) (AUD 0.014)(Table 5.22).

Table 5.22. Traders' average marketing cost when selling to their most preferred buyers (VND/kg)

Downstream buyers	**Average costs**				
	Re-dry	Re-sort	Pack	Transport	Marketing cost
Other larger traders	50	90	40	60	240
Company	40	80	40	65	225

The marketing costs at the trader level included the cost of re-drying, re-sorting, packing and transporting coffee to their downstream buyers. While the cost of

transport is higher when selling to companies (VND 65/kg) (AUD 0.004/kg), the cost of re-drying (VND 50/kg) (AUD 0.003/kg) and re-sorting (VND 90/kg) (AUD 0.005) was higher when selling to other traders.

Due to the lack of appropriate storage, major reductions in the quality of the coffee produced at the farm level and in the initial aggregation by collector agents were not uncommon. The majority of the losses occurred after re-drying (0.9%), re-sorting (2%) and transporting (0.7%). While some traders did not experience any losses in transporting coffee to their buyers, others experienced losses of up to 1%. At the trader level, the average losses were 2.9% (Table 5.23).

Table 5.23. The percentage of losses at the trader level

Activities	Traders			
	n	Min	Max	Mean
Re-dry	32	0.7	1.0	0.9
Re-sort	32	1.8	2.3	2.0
Transport	32	0.0	0.9	0.7
Percentage of losses	***32***	***2.5***	***3.9***	***2.9***

Most of the losses at the trader level were due to poor quality (53%); physical damage (40%); small bean size (34%); pest and disease problems (28%); failure to meet customers' requirements (25%); inappropriate maturity (19%); and an unfavourable climate (14%)(Table 5.24). The high rate of black and broken coffee (9%) was also a common problem for traders. Each of these is directly or indirectly the result of poor cultivation practices by the farmers.

Table 5.24. Factors contributing to the losses at the trader level

Factors*	Traders	
	n=32	%
Poor quality	17	53.1
Physical damage by the processing/ dryer machine	13	40.6
Bean size below the requirements	11	34.4
Pest and disease problems	9	28.1
Failure to meet the customers' requirements	8	25.0
Inappropriate maturity	6	18.7
Unfavourable climate	4	12.5
High rate of black and broken coffee	3	9.4

**Multiple responses*

At the trader level, 38% of traders reported that they often made deductions from the payments due to their suppliers to compensate for the sale of poor quality coffee to local retailers.

When asked about the reason for the losses incurred in transportation, 56% of the traders reported that the coffee was transported for long distances and 38% indicated that the losses arose from the poor quality of the coffee beans. Moreover, reductions in quality could arise from overloading (31%) or exposure to high temperatures (18%). Adverse weather condition during transport (12%) was another contributing factor (Table 5.25).

Table 5.25. Factors in transport losses at the trader level

Factors	Traders	
	n=32	%
Long distance/ Long time transport	18	56.2
Poor quality	12	37.5
Transport too much/ Overloading	10	31.2
Unsuitable bag	8	25.0
High temperature	6	18.7
Unfavourable weather condition	4	11.8

**Multiple responses*

5.4.3 Companies' activities and marketing cost analysis

Companies have established networks with many affiliated traders and collector agents in coffee producing communes. Most companies purchase coffee from the traders (36%). Besides that, companies also purchase coffee from farmers (21%) and collector agents (29%).

At the company level, the major activities are associated with re-processing the coffee purchased (100%), re-sorting (100%) and repacking. The other major activity is related to the delivery of the coffee purchased to downstream customers (Table 5.26).

Table 5.26. Companies' activities when purchasing from their most preferred suppliers

Activities	Companies			
	Yes		No	
	n	%	n	%
Re-processing	14	100.0	0	0.0
Re-sorting	14	100.0	0	0.0
Packing	14	100.0	0	0.0
Storing	11	78.6	3	21.4
Delivering	14	100.0	0	0.0
Loading	14	100.0	0	0.0

The main marketing cost for the companies was re-sorting, which is the main activity undertaken to ensure that the coffee meets customers' requirements.

Packaging is another significant cost at the company level. This includes packaging materials (such as the jute bags and the threads used in the machine sewing of the bags) and the labour involved.

The average activity cost incurred by the companies was VND 2,750 (AUD 0.16) per kg. The cost of re-sorting was the major cost for most companies (VND 1,300/kg) (AUD 0.08/kg). Transport costs ranged from VND 300(AUD 0.02) to 500(AUD 0.03) per kg as the coffee was transported over long distances. The average costs for loading/unloading coffee was VND 100(AUD 0.006) and 80(AUD 0.005) per kg, respectively (Table 5.27).

Table 5.27. Companies' average marketing costs (VND/kg)

Activities	Companies			
	n	Min	Max	Mean
Re-processing	14	700	1,000	800
Re-sorting	14	1,000	1,500	1,300
Packing	14	100	200	150
Unloading/ Loading	14	80	100	90
Transport	14	300	500	400
Marketing costs	***14***	***2,180***	***3,300***	***2,750***

Companies experienced different marketing costs when purchasing coffee from different suppliers. The average cost that companies incurred when purchasing coffee from farmers was VND 2,200(AUD 0.13) per kg (Table 5.28). The average cost of re-processing was VND 850(AUD 0.05) per kg; re-sorting was VND 1,250(AUD 0.07) per kg and repacking was VND 120(AUD 0.007) per kg.

Table 5.28. Companies' average marketing costs when purchasing from their most preferred suppliers (VND/ kilogram)

Upstream suppliers	Average costs				
	Re-process	Re-sort	Pack	Unloading	Marketing cost
Farmers	850	1,250	120		2,220
Collectors	800	1,200	120		2,120
Traders	700	1,000	110	80	1,890

When purchasing coffee from the traders, companies paid a higher cost for transport (VND 80(AUD 0.005) per kg), but the costs for re-processing, re-sorting and

repacking were markedly lower as the improvements in quality associated with reprocessing and resorting had been undertaken by the traders. The average marketing cost when purchasing coffee from traders was VND 1,890(AUD 0.11) per kg. When the companies purchased coffee from collector agents, the average marketing cost was VND 2,120(AUD 0.12) per kg.

The average losses for companies were 6%. However, the losses varied from company to company, depending on the quality of the coffee they have purchased. More than 50% of the companies reported that they have a loss rate of around 6%; losses at the company level varied from 5 to 7% (Table 5.29).

Table 5.29. The average percentage of losses at the company level

Activities	Companies			
	n	Min	Max	Mean
Re-processing	4	1.5	1.8	1.7
Re-sorting	18	2.1	3.2	2.8
Delivery	12	1.2	2.0	1.4
Total	**15**	**4.8**	**7.0**	**5.9**

Companies indicated that the main losses occurred after re-sorting as much of the coffee purchased failed to meet the customers' requirements (64%); it was poor quality (57%); physically damaged (29%) or damaged by pest and disease infestation (14%)(Table 5.30).

Table 5.30. Factors resulting in losses after re-sorting at the company level

Factors*	Companies	
	n=14	%
Failure to meet the customers' requirements	9	64.2
Poor quality	8	57.1
Physical damage	4	28.6
Immaturity	4	28.6
Inappropriate sorting	3	21.4
Pest and disease infestation	2	14.2

**Multiple responses*

Most companies disposed of the poor quality coffee to local buyers who roasted and ground the coffee and thereafter resold it as soluble instant coffee powder for domestic consumption (Table 5.31).

Table 5.31. The use of unqualified coffee by the companies

Factors*	Companies

	n=14	%
Sell to buyers who make solute instant coffee powder	10	71.4
Sell to buyers who make organic fertilisers	4	28.6

**Multiple responses*

The means of transport for the companies was most often by truck. At the company level, transport over long distances (86%) and overloading (64%) usually resulted in some losses as they tried to save on transport costs. The weather being too hot (50%) and poor quality (43%) were the other factors contributing to the losses incurred during transportation (Table 5.32).

Table 5.32. Factors in transport losses at the company level

Factors*	Companies	
	N	%
Long distance/ Long time transport	12	85.7
Overloading	9	64.2
Weather too hot/ high temperature	7	50.0
Poor quality	6	42.8
Rain	2	14.2

**Multiple responses*

5.5 Market prices and supply chain actors' marketing margins

This section is organised into six parts. In the first section, general information about the market price is presented. The different prices paid by each of the market intermediaries for the farmers' coffee are described in the following sections. An analysis of the marketing margins for farmers, collector agents, traders and companies then follows.

5.5.1 Market prices

Farmers indicated that different buyers paid different prices for their coffee. A comparison of the average prices received by farmers from their alternative buyers was undertaken, based on the high, low and average buying and/or selling prices that the farmers and each market intermediary provided. However, not all respondents provided answers to the questions on the prices at which they purchased and/or sold coffee. As prices are sensitive and confidential business information, the reluctance in providing an answer is understandable.

Table 5.33 lists the highest, lowest and average prices which respondents provided based on their memory. Coffee prices fluctuate all year round at each level of the coffee supply chain; the lowest price achieved was VND 32,000(AUD 1.88) per kg, while the highest price was VND 41,000(AUD 2.41) per kg.

Table 5.33. The highest, lowest and the average selling/buying coffee price at each actor level (VND/kg)

Actors	Highest	Lowest	Average
Farmer	41,000	32,000	34,500
Collector agent	39,000	32,000	34,000
Trader	40,000	33,000	34,500
Company	41,000	34,000	35,000

The coffee harvest season extends from October to January. In general, the high supply leads to lower prices. The difference in price between the low season (VND 41,000(AUD 2.41) per kg) and the high season (VND 32,000(AUD 1.88) per kg) are more modest at the farmer level with an average gap of VND 9,000(AUD 0.52) per kg. For the collector agents, traders and companies, the difference between the high and low season price is just VND 7,000(AUD 0.41) per kg.

As cited by the respondents, the main reasons for the buyers refusing to purchase the coffee or negotiating to reduce the purchase price include the following: harvest immaturity (60%); poor quality (41%); do not meet requirements (36%); pest and disease damage (21%); as well as small and broken bean (9%) (Table 5.34).

Table 5.34. The main reasons for the buyers refusing to purchase the coffee

Reasons*	n=78	%
Harvest immaturity	47	60.2
Poor quality	32	41.0
Do not meet requirements	28	35.9
Pest and disease damage	17	21.8
Small bean size	7	9.0
Broken bean	7	9.0
Variety quality	5	6.4

**Multiple responses*

After sorting, farmers dispose of the reject coffee by selling it to people who make: soluble instant coffee powder (55%); charcoal (40%); use it as fuel for their boiler (30%); use it as fuel for their coffee dryer (20%); or use the reject beans as a fertilizer (14%) (Table 5.35).

Table 5.35. Use after sorting at the farm level

Factors*	n=78	%
Sell to person who buys to make solute instant coffee powder	43	55.1
Sell to person who buys to make charcoal	31	39.7
Sell to person who buys to use as energy	23	29.5
Sell to person who uses as burning material for coffee dryer	16	20.5
Sell to person who uses as fertilizer	11	14.1

**Multiple responses*

5.5.2 Different prices from different market intermediaries for farmers' coffee

Farmers reported that they received the highest price from companies of VND 36,000(AUD 2.11) per kg for first grade coffee, and the lowest price of VND 34,000(AUD 2.00) per kg for ungraded coffee from collector agents (Table 5.36).

Table 5.36. Average prices of coffee received by farmers from each preferred market intermediary by grade (VND/kg)

Market intermediaries	The price received by farmers from different buyers			
	First	Second	Third	Ungraded
Collector agents	35,500	35,000	34,500	34,000
Trader	35,700	35,200	34,700	
Company	36,500	35,500	35,000	

Most farmers indicated that the prices they received for ungraded coffee was marginally lower than what they received for first grade coffee – except for that coffee which was sold to companies. Not surprisingly, most farmers concluded that there was little benefit to be gained by grading coffee prior to sale. Although the companies generally paid the highest price, most farmers preferred to sell their coffee to traders because they were less demanding.

For those farmers who sold directly to local collector agents, the price they received was less than what other buyers were prepared to offer. This was because farmers either had poor quality coffee or they had entered into some financial arrangement with the collector agent to provide a cash advance.

In examining the prices received, the highest prices per kg (VND 35,700(AUD 2.10) and VND 36,500(AUD 2.15)) were paid by the traders and companies respectively, while the lowest price (VND 34,000/kg) (AUD 2.00/kg) was received from collector agents. For the traders, the price for third grade coffee was around VND 34,700(AUD 2.04) per kg, but traders were prepared to pay up to VND 35,700(AUD

2.10) per kg for first grade coffee. However, as the price difference between first grade and second grade coffee was only VND 500(AUD 0.029) per kg, most of the coffee was sold ungraded to collector agents. For companies, however, the price margin for first grade coffee was more attractive (VND 1,500 (AUD 0.088) per kg), however, very few farmers were able to meet the companies requirements.

In selling to different market intermediaries, different costs were incurred by the farmers. While the collector agents were willing to pay VND 34,000(AUD 2.00) per kg for ungraded coffee, no other costs were involved. On the other hand, traders were willing to pay a higher price for graded coffee, but farmers were then responsible for the additional costs of grading and transport. The details of the various costs of transacting with alternative buyers will be explored below.

5.5.3 Marketing margins for farmers

The marketing margins for each actor in the coffee supply chains are calculated based on the mean price and the marketing costs that the participants provided. The net marketing margin is the gap between the buying and selling prices, minus the total marketing costs.

Data on the marketing costs show that the farmers' costs incurred in drying, processing, grading, packing and transporting the coffee are different for each market intermediary. The average cost for each value-added activity undertaken by the farmers was also quite diverse.

When farmers sold their coffee to collector agents, the marketing costs were minimal. The major marketing cost was the cost of labour to harvest the coffee (VND 1,150/kg) (AUD 0.067/kg), for drying (VND 650/kg) (AUD 0.038/kg) and processing (VND 400/kg) (AUD 0.023/kg) plus losses of VND 90/kg (AUD 0.005/kg). Thus, from an average price of VND 34,000/kg (AUD 2.00/kg), farmers could expect to extract a marketing margin of VND 31,710/kg (AUD 1.86) (Table 5.37).

Table 5.37. Marketing margins that farmers receive from each market intermediary for one kilogram of coffee (VND/kg)

Costs	Collector	Trader	Company
Average return	34,000	34,700	35,000
Marketing costs	2,200	2,430	2,510

Loss	90	150	180
Marketing margin	***31,710***	***32,120***	***32,310***

Farmers who sold coffee without processing transacted with collector agents. Marketing costs were minimal, but the price they received from collector agents was four to five times lower in comparison with what they received after drying from the same collector agents, due to the loss of moisture after drying. The average price that farmers received from collector agents was VND 6,500 (AUD 0.38) per kg of cherry. Four and one half kg of cherry are equivalent to one kg of parchment. As a result, farmers selling cherry to collector agents were only able to extract a net margin of VND 29,250 (AUD 1.72) per kg.

Farmers who dry, process and sort coffee and then sell the parchment to traders or companies, faced higher marketing costs. The marketing costs when selling to traders or companies were VND 2,430/kg (AUD 0.143/kg) and VND 2,510/kg (AUD 0.148/kg) respectively; with post-harvest losses of VND 150/kg (AUD 0.009/kg) and VND 180/kg (AUD 0.011/kg), respectively. The prices that farmers received from traders was 2.1% higher, compared to what farmers received from collector agents, but 0.9% lower than the prices achieved when farmers sold to companies. The net margin that farmers were able to extract from the traders was VND 32,120/kg (AUD 1.89/kg), while those who sold direct to companies received a net marketing margin of VND 32,310/kg (AUD 1.9/kg). In selling directly to a company, the coffee supply chain was shorter and the marketing costs were lower. However, only a few smallholder coffee farmers could gain direct access to company supply chains because of the need to deliver a large volume of consistently good quality coffee and the perquisite cultivation techniques.

5.5.4 Marketing margins for collector agents

For the collector agents, a marketing cost of VND 315/kg (AUD 0.018/kg) was associated with the costs of hand sorting, packing and transporting. When collector agents purchased ungraded coffee, the post-harvest losses were high. Losses arose from physical damage, pest and disease damage and the unexpected impact of adverse climatic factors. On average, the most significant cost for the collector agents when purchasing from farmers was post-harvest loss equivalent to VND 260/kg (AUD 0.015/kg) (Table 5.38).

Table 5.38. Marketing margins that collector agents receive from the upstream farmers (VND/kg)

Costs	Buying from farmers
Average return	35,000
Purchase price	34,000
Marketing costs	315
Loss	260
Marketing margin	***425***

Collector agents purchased the coffee and either paid in full, or paid half of the negotiated price at the time the transaction was concluded. The balance was settled after they had been paid by their downstream customers. The profit that the collector agents ultimately received depended on the purchasing price they paid to the farmers and the price at which they were able to sell the coffee they had purchased to traders or companies. Collector agents, on average, received a net profit margin of just VND 425 (AUD 0.025) per kg for the coffee they handled.

Collector agents achieved a marketing margin of VND 605/kg (AUD 0.036/kg) when they sold to traders (Table 5.39). However, when collector agents chose to sell coffee direct to companies, the margin that they were able to extract was lower (VND 565/kg) (AUD 0.033/kg). Although the price they received from the companies was higher than what they received from traders, higher costs were involved in transacting with companies.

Table 5.39. Marketing margins that collector agents receive from their downstream customers (VND/kg)

Cost	Sell to traders	Sell to companies
Average return	35,000	35,100
Purchase price	34,000	34,000
Marketing costs	245	355
Loss	150	180
Marketing margin	***605***	***565***

Consequently, most collector agents preferred to transact with traders, whereas companies were generally their second most preferred buyer. In most cases, collector agents sold their coffee on consignment to the traders. Because of their personal relationship, collector agents usually received payment only after the traders had resold the coffee.

Collector agents also sold coffee direct to companies, however, this channel offered limited opportunities, as companies only purchased large volumes of coffee.

5.5.5 Marketing margins for traders

Traders have a network of many affiliated collector agents from whom they purchase the coffee they have brought from farmers. Traders must re-sort, re-dry, repack, transport and deliver coffee to their downstream buyers. In most cases, traders are able to extract the margin that they desire, irrespective of the purchase price, as well as passing on their activity costs to suppliers.

From the traders' perspective, there was little difference in the costs incurred when purchasing coffee from farmers or collector agents. While the cost of purchasing coffee from farmers was VND 34,700/kg (AUD 2.04/kg), the cost of purchasing from collector agents was VND 35,000/kg (AUD 2.06/kg) (Table 5.40). As such, the price offered by the farmers was cheaper than that offered by the collector agents.

Table 5.40. Marketing margins that traders receive from their upstream suppliers (VND/kg)

Costs	Buying from farmers	Buying from collector
Average return	35,700	36,000
Purchase price	34,700	35,000
Marketing costs	220	140
Loss	110	90
Marketing margin	***670***	***770***

The coffee purchased from farmers was resold at VND 35,700/kg (AUD 2.10/kg), which was lower than the price at which traders were able to resell the coffee purchased from collector agents (VND 36,000/kg (AUD 2.12/kg)). As a result, the marketing margin that traders were able to extract from the collector agents (VND 770/kg (AUD 0.045/kg)) was higher than that they could achieve by transacting with farmers (VND 670/kg (AUD 0.039/kg)). The main reason for the higher profitability was the better quality of the coffee purchased from collector agents which reduced marketing costs.

Traders generally received higher prices for their coffee when they sold to companies (VND 36,000/kg (AUD 2.12/kg)), compared to when they sold to other traders (VND 35,700/kg (AUD 2.10/kg)) (Table 5.41).

Table 5.41. Marketing margins that traders receive from their downstream customers (VND/kg)

Costs	Selling to companies	Selling to other larger
Average return	36,000	35,700
Purchase price	35,000	34,700
Marketing costs	225	240
Loss	90	170
Marketing	***685***	***590***

As the marketing costs for traders were lower when they sold to companies rather than to other traders, traders could extract a higher marketing margin of VND 685/kg (AUD 0.040/kg) from companies, whereas the margin was only VND 590/kg (AUD 0.035/kg) when selling to other traders. Therefore, traders chose to sell to other traders only when they had to. Although the price realised was not as high as from companies, traders still benefitted from the transaction as they have another trusted supplier when needed.

5.5.6 Marketing margins for companies

In purchasing directly from farmers, companies often paid a community leader to visit the farmers' fields and to monitor the quality of the coffee produced to ensure farmers followed prescribed cultivation techniques. The companies provided inputs and also conducted training courses for the farmers to learn more about the technical aspects of cultivation.

Companies purchased coffee from farmers only when they had a contract with them and where they were able to extract a high margin. Companies indicated that farmers usually sold coffee at a price of VND 34,700/kg (AUD 2.04/kg), compared to collector agents (VND 35,100/kg (AUD 2.06/kg)) and traders (VND 36,000/kg (AUD 2.12/kg)) (Table 5.42).

Table 5.42. Marketing margins that companies receive from their upstream suppliers (VND/kg)

Costs	Buying from farmers	Buying from collector agents	Buying from traders
Average return	39,000	39,000	40,000
Purchase price	34,700	35,100	36,000
Marketing costs	2,220	2,120	1,980
Loss	185	180	160
Marketing	***1,895***	***1,600***	***1,860***

When purchasing from farmers, companies had to re-sort, re-dry, re-grade and repack the coffee. The marketing cost amounted to VND 2,220/kg (AUD 0.13/kg). However, by purchasing direct from farmers, the companies could extract a marketing margin of VND 1,895/kg (AUD 0.11/kg). This margin was higher than that obtained from transacting with collector agents (VND 1,600/kg (AUD 0.094/kg)) or traders (VND 1,860/kg (AUD 0.109/kg)).

Companies indicated that the prices at which they purchased coffee from traders (VND 36,000/kg (AUD 2.12/kg)) were generally higher than that from farmers (VND 34,700/kg (AUD 2.04/kg)) or collector agents (VND 35,100/kg (AUD 2.06/kg)). However, the prices at which they were able to sell the coffee were also higher. The higher selling prices were able to justify the higher purchasing costs. As a result, despite the higher purchase cost, companies were still able to make a net return of VND 1,860/kg (AUD 0.109/kg) when transacting with traders.

Another companies' supplier is other company. Companies often purchased coffee from other companies when they need to fill their orders from customers. Such transactions were rarely profitable because of the high costs involved. The price of the coffee purchased from companies was VND 36,200/kg (AUD 0.213/kg) (Table 5.43). However, most companies engaged in the practice at some time, especially in the low season when there was not much coffee available for sale.

Table 5.43. Marketing margins that companies receive from other companies' customers (VND/kg)

Costs	Buying from other company
Average return	39,000
Purchase price	36,200
Marketing costs	1,990
Loss	180
Marketing margin	**630**

5.6 Chapter discussion

The findings from the main quantitative study indicate that there are five alternative supply chains in the Central Highlands coffee industry of Vietnam. Coffee marketing involves three main actors, namely the collector agents, traders and companies. Most farmers sold their coffee to collector agents. Alternatively, farmers could deal with

traders when they did not have a financial relationship with collector agents. However, farmers could only transact directly with companies when they had a contract.

Most large scale farmers preferred to transact directly with companies because of their ability to produce large volumes of coffee. On the other hand, farmers with only a small volume of coffee had to sell either to collector agents or traders.

Farmers received a higher marketing margin when selling to traders than from collector agents. As expected, transport costs were a major component of the activity costs when farmers sold to traders. Although transport costs and losses were higher, farmers received a better price from traders, which explained the higher net margin farmers received when selling to traders.

The marketing margins each actor received differed when they transacted with different partners. Farmers indicated that they received higher prices when selling to the traders, or companies. Farmers selling to collector agents had the lowest cost of marketing as collector agents purchased coffee without grading and collected the coffee from the farmers' house.

Collector agents indicated that they received a higher price from the companies compared to traders, however the margin that collector agents were able to extract was lower. This is in line with both (Batt, Concepcion and Digal 2006) and (Le 2015) who stated that many farmers preferred to sell their product ungraded to traders as it enabled them to sell everything to one buyer, rather than to seek alternative buyers for inferior product which failed to meet the focal buyers' requirements.

The companies indicated that the prices at which they purchased coffee from collector agents was higher than that from farmers. However, the prices at which they were able to sell that coffee were also higher.

Although the marketing margins extracted from traders were generally lower than other suppliers, most companies preferred to transact with traders because traders were the best able to meet their requirements in terms of quality, quantity and their ability to deliver coffee when required. It appears that price or profit is not only the motivating factor for choosing preferred trading partners. Rather, meeting other

market requirements such as quality, quantity, or delivery term are also important (Monczka et al. 2015; Pal 2013; Batt 2003).

The results also highlight the similarities and differences in the activities that various actors in coffee supply chains undertake and the associated costs of performing those activities. From the marketing margin analysis, it is immediately apparent that the additional costs of performing activities such as drying, processing, sorting, packing, storage and transportation increase as the product moves further downstream. Drawing on the quality management literature (Flynn* and Flynn 2005; Flynn, Schroeder and Sakakibara 1995), it is more cost effective to address problems associated with poor quality at the source, rather than to attempt to rectify the problem further downstream. However, in the case of the Vietnamese coffee industry, as price incentives for quality are not adequately transmitted to smallholder farmers, there is no reason to change, and thus little prospect for improving the quality of Vietnamese coffee in the world market.

In the case of coffee, while market intermediaries may endeavour to improve the quality of the product by drying, resorting and regrading, quality is ultimately evaluated by the consumer when they taste the coffee. Inappropriate harvesting practices and the failure to remove immature and overripe cherries will introduce off flavours which can only be removed by blending with superior parcels of coffee. Strip picking, whereby all the cherry on the tree is harvested at one time, irrespective of maturity, will accentuate the problem. However, as many farmers reported, with the increasing incidence of cherry theft, farmers have little choice.

The increasing incidence of cherry theft (in the preliminary results), the volatility in international coffee prices (Eakin, Winkels and Sendzimir 2009; Ha and Shively 2008) and the greater uncertainty associated with climate change (Lindskog et al. 2005; Hoang et al. 2014) are also likely to have some impact on the amount of inputs farmers choose to apply to their coffee trees. As many farmers reported, one of the main reasons for declining productivity is a reduction in the quantity of inputs applied.

Due to the fluctuation in prices (as the prices are highly volatile), the manner in which market intermediaries manage price risk is to either purchase on consignment or to pay 50% of the anticipated price upfront and pay the balance 10-14 days later.

This concept of 50% down also enables market intermediaries to manage the variation in quality, as they deduct the additional costs of redrying, regrading and resorting from the proceeds of the sale. This complication is the main constraint for all actors in the coffee supply chains. In this uncertain business environment, actors need to engage in long-term relationships to reduce their risks (Batt, 2006).

Theoretically, sellers will seek to sell products to whoever offers the highest price (Young and Hobbs 2002) however, this is not apparent in this study. The results demonstrate that farmers often sell to customers at a lower price because these customers are more relaxed in their quality requirements. Furthermore, as most market intermediaries pay only after the coffee has been sold, there is a need to explore the nature of the long-term relationships among actors. Furthermore, as marketing theory primarily talks about serving the needs of downstream buyers (Amstrong et al. 2014; Kotler 2009), smallholder farmers prefer to deal with those customers who needs they can best meet. Thus there is a strategic fit between suppliers and the customers they serve.

In the Central Highlands coffee supply chains, most of the quality problems arise at the farm level. These constraints include the inability of most farmers to access fertilisers, chemicals, inappropriate cultivation and processing techniques, and the limited amount of information exchanged. This is because their scale of operation is too small to invest in the fixed assets; farmers have limited access to advanced technology and limited market information, especially information on buyers. As Rios and Shively (2016) state that small farms were less efficient than large farms.

Collector agents operate on a commission basis to move coffee from farmers to traders. Collector agents are seldom large enough to consider investing in appropriate storage, thus many problems arise during the raining season. The coffee absorbs moisture easily and may become infected with fungi.

Harvest and post-harvest processes are often identified as critical quality control points. Without the proper cultivation technique and input, it is difficult to maintain high-quality product. In many areas, inadequate drying facilities are a constraint to improving coffee quality. This is another reason explaining why it is so hard to get any improvement in quality. Most farmers harvest and dry their own coffee

cherries and then sell them either to collector agents or deliver it themselves to traders or companies. During particularly wet harvest periods, their limited natural drying capacity means that the coffee quality is more likely to diminish. Solar-assisted mechanical dryers that are economical and environmentally preferable have been tested in several countries but have not yet to be trialled in Vietnam, possibly due to the lack of investment. This situation is the same as the PNG coffee industry which is dominantly smallholder farmers (Murray-Prior 2008), with inadequate facilities and traditional techniques. Consequently, improving coffee quality is a challenging task.

In the next chapter, the difference between what actors' expected and what they received from their trading partners will be presented.

CHAPTER 6
DIFFERENCE BETWEEN REQUIREMENTS AND OFFER QUALITY BETWEEN TRADING PARTNERS

6.1 Introduction

This chapter identifies the gap between what the farmers want and what they actually receive from their alternative downstream trading partners in Section 6.2. Section 6.3 focus on the capacity of the upstream suppliers to deliver what their downstream customers require. Next, Section 6.4 addresses the extent to which alternative upstream suppliers are better able to deliver what is expected from them. A similar analysis is performed to identify what upstream suppliers' expect to receive (Section 6.5) and actually do receive (Section 6.6) from their downstream buyers. In the last section is the chapter summary. By looking at the gap between what is desired and what is actually received, it should be possible to improve the offer quality, to reduce the risk and uncertainty, and to add greater value, which should ultimately improve the performance of the Vietnamese coffee industry.

6.2 Gap between the farmers' requirement and what they received from their downstream trading partners

This section is organised into four parts. Firstly, what the farmers expect from their downstream trading partners will be identified. Secondly, how well the farmers' most preferred buyers meet these same criteria will be described, followed by an examination as to how well the farmers' second most preferred buyer meets these criteria. Finally, the extent to which each downstream buyer meets the farmers' selling criteria will be explored.

6.2.1 What farmers expect from their downstream trading partners

The most important criterion that the farmers considered when deciding whom to sell their coffee was a high price (40% of responses). This was followed by reputation (35%) and a long-standing close relationship (25%) (Table 6.1).

Table 6.1. The farmers' criteria for choosing the buyers for their coffee

Criteria*	Frequency (n=217)	Percentage
High price/meet my requirement for price	87	40.0
Reputation/reliable	76	35.0
Long-standing/close relationship	54	24.9
Pay cash immediately and pay in full	45	20.7
Pay on time	37	17.0
Buy non-graded product/No specific requirement/Easy purchase	32	14.7
Pay an acceptable price	24	11.1
Pay a deposit/Provide a loan to buy fertiliser	19	8.7
Purchase all year round	15	6.9
Have no other buyers/no intention to choose the other buyer	13	6.0
Sell to whoever pays a higher price	12	5.5
No price pressure	10	4.6
Based on loan agreement	8	3.7
Purchase all my products	7	3.2
Trust/ keep promises	6	2.8
Stable price	5	2.3
Save cost/do not pay transport cost	5	2.3
Geographically close/local people	4	1.8
Purchasing and selling agreement/reach mutual agreement	4	1.8
Meet my requirements	4	1.8
Understand my problems/share my difficulties	4	1.8
Provide technical advice	3	1.4
Decrease the risk of lower price	2	0.9
Have no commitment	2	0.9
Have many buyers	1	0.5
Share price information	1	0.5
Secure payment/no risk	1	0.5

**Multiple responses*

To secure payment, farmers preferred to be paid in cash immediately and to be paid in full (21%). Alternatively, some farmers were willing to accept deferred payment, provided that it was paid on time without delay (17%).

Farmers preferred to trade with exchange partners who were willing to buy their product without any specific requirements (15% of responses). Farmers, who had limited capital for re-investment in the next crop, preferred to sell to a buyer who was willing to provide a loan for fertilisers (9%) - the most significant external input cost for the production of coffee.

Rather than selling all their coffee at once, most farmers sold their stock only when they needed the money for household expenses or when the price was high. In most instances, farmers preferred to sell their coffee to exchange partners who would purchase their coffee all year round (7%).

While some farmers admitted that they had no desire to seek an alternative buyer (6% of responses), other farmers (6%) were prepared to sell to whatever party would pay the highest price.

The results of the Fisher's least significant difference (LCD) analysis showed that from the farmers' perspective, the five most important variables that they sought from their alternative buyers were: (1) an acceptable price; (2) trustworthiness; (3) on-time payment; (4) a good business reputation; and (5) a long-standing relationship between the farmer and downstream buyers (Table 6.2).

Table 6.2. Importance of the criteria the farmers use in choosing between alternative buyers

Criteria	Mean	SD
provides me with a fair price	5.28[a]	0.687
is trustworthy	5.15[a]	0.811
pays on time	5.14[a]	0.781
has a good business reputation	5.10[a]	0.632
we have a long-standing/good relationship	5.04[a]	0.678
rewards me for good quality	4.92[b]	0.827
able to purchase my harvested coffee all year round	4.71[b]	0.645
is geographically close to me	4.66[b]	0.729
offers credit	4.09[c]	0.865
is willing to meet my immediate needs	4.06[c]	0.836
provides technical information/advice	3.41[d]	0.785
provides market information	3.41[d]	0.643
communicates regularly	3.30[e]	0.793
can transport coffee from my farm	3.05[e]	0.843

where 1.0 is not at all important and 6.0 is very important
where those items with the same superscript in the same column are not significantly different at p = 0.05

Furthermore, farmers expected their downstream buyers to reward them for producing good quality coffee, to purchase their coffee all year round, and to be located geographically close to their place of residence. Farmers also expected downstream buyers to offer them credit to meet their immediate needs - to treat an illness, a funeral or a neighbour's wedding ceremony.

6.2.2 Extent to which the farmers' most preferred buyers met their requirements

Looking at the mean scores between what the farmers expected and what the farmers actually received from their most preferred buyers, it was clear that most buyers were unable to meet the farmers' needs with regard to providing an acceptable price, paying on time, or to reward farmers for producing good quality coffee (Table 6.3).

Table 6.3. Criteria the farmers required and the extent to which most preferred buyers met these criteria

Criteria	Farmer expect[1]		Farmer receive[2]		Sig
	Mean	SD	Mean	SD	
provides me with a fair price	5.28	0.687	4.11	0.765	0.000
is trustworthy	5.15	0.811	4.77	0.661	0.000
pays on time	5.14	0.781	4.12	1.053	0.000
has a good business reputation	5.10	0.917	4.15	0.864	0.096
we have a long-standing/ good relationship	5.04	0.876	5.00	0.745	0.643
rewards me for good quality	4.92	0.827	4.35	0.827	0.000
able to purchase my coffee all year round	4.71	0.988	4.78	0.863	0.412
is geographically close to me	4.66	0.929	4.76	0.838	0.255
offers credit	4.09	1.037	4.50	0.654	0.000
provides technical information/ advice	3.41	1.085	3.13	0.903	0.000
provides market information	3.41	1.024	3.12	0.750	0.000
communicates regularly	3.30	0.976	3.01	0.677	0.000
is willing to meet my immediate needs	3.25	0.831	3.73	0.715	0.000
can transport coffee from my farm	3.05	0.843	4.10	1.099	0.000

[1] where 1 is "not at all important" and 6 is "very important"
[2] where 1 is "not at all well" and 6 is "very well"

Although most farmers seemed to be satisfied with their long-standing relationships with their most preferred buyers, there was an element of distrust evident in the exchange. Farmers were dissatisfied with the lack of communication with the buyers and their inability to provide technical advice. In contrast, most preferred buyers were able to offer credit to farmers and most buyers were able to meet farmers' immediate need for cash. Furthermore, most buyers were willing to collect the coffee from farmers' place of residence and transport it to the market themselves.

6.2.3 Extent to which the farmers' second most preferred buyers met their requirement criteria

Based on the financial agreements that some farmers made with their most preferred buyers, they were obliged to sell their coffee to those buyers at a lower price in order to repay the loan. Having sold the agreed amount of coffee to their most preferred

buyer and having fulfilled their commitment to them, farmers could then sell whatever remained of their coffee to other buyers for a higher price.

When comparing between what farmers received from their most preferred buyer and what they received from their second most preferred buyer, it can be seen that the farmers' second most preferred buyer generally offered a higher price for the coffee and made more timely payments (Table 6.4).

Table 6.4. Comparison between what the farmers received from their most preferred buyer and their second most preferred buyer

Criteria	Farmer receive from most preferred[1]		Farmer receive from second buyer[1]		Sig.
	Mean	SD	Mean	SD	
is geographically close to me	5.12	0.807	3.29	0.540	0.000
able to purchase my coffee all year round	4.84	0.921	4.10	0.467	0.000
is trustworthy	4.65	0.723	3.71	0.707	0.000
we have a long-standing/ good relationship	4.43	0.677	3.22	0.685	0.000
rewards me for good quality	4.18	0.928	4.27	0.811	0.674
has a good business reputation	4.16	0.773	2.96	0.735	0.000
offers credit	4.14	0.645	3.29	0.707	0.000
provides me with a fair price	4.08	0.702	4.82	1.014	0.000
pays on time	3.94	0.899	4.43	1.155	0.020
provides market information	3.86	0.935	3.92	0.449	0.685
can transport coffee from my farm	3.78	0.771	4.71	0.866	0.000
is willing to meet my immediate needs	3.67	0.851	3.27	0.446	0.008
provides technical information/ advice	3.49	0.794	2.99	0.649	0.000
communicates regularly	3.22	0.715	2.90	0.621	0.017

[1] where 1 is "not at all well" and 6 is "very well"

However, the second most preferred buyer did not commit to purchasing coffee all year round nor were they willing to extend credit to farmers. Most of these buyers were opportunistic, going only to farmers when the price of coffee was high. The second most preferred buyers generally had a poor business reputation and were not usually considered trustworthy.

6.2.4 Extent to which farmers' downstream buyer met their requirement criteria

The results of the face-to-face interviews revealed that farmers sold their coffee to collector agents when they had a financial relationship with collector agents, had no capacity to deliver their coffee to traders, or were unable to access other buyers.

Comparing between what farmers expected and what they actually received from their most preferred collector agents, farmers indicated that they were often dissatisfied in their transactions with collector agents. Farmers strongly believed that the price they received from collector agents was often lower than what they had been promised (Table 6.5).

Table 6.5. Criteria the farmers required and the extent to which the collector agents met these criteria

Criteria	Farmer expect[1]		Farmer receive[2]		Sig.
	Mean	SD	Mean	SD	
pays on time	5.11	0.777	5.01	0.876	0.359
provides me with a fair price	5.10	0.764	3.02	0.864	0.000
is trustworthy	4.98	0.864	4.73	0.690	0.006
we have a long-standing/ good relationship	4.90	0.965	4.87	0.797	0.785
has a good business reputation	4.89	1.061	3.60	0.813	0.000
able to purchase my coffee all year round	4.74	0.943	4.85	0.701	0.289
rewards me for good quality	4.68	0.942	4.05	0.837	0.000
is geographically close to me	4.09	0.855	4.68	1.077	0.000
offers credit	4.06	1.089	4.54	1.105	0.327
provides market information	3.37	1.030	2.99	0.654	0.000
provides technical information/ advice	3.35	1.096	2.97	0.691	0.000
communicates regularly	3.33	0.966	3.98	0.736	0.172
is willing to meet my immediate needs	3.25	0.910	3.30	0.476	0.546
can transport coffee from my farm	3.09	0.855	3.13	0.624	0.626

[1] where 1 is "not at all important" and 6 is "very important"
[2] where 1 is "not at all well" and 6 is "very well"

Furthermore, farmers indicated that they were seldom rewarded for producing better quality coffee. As a result, there was an element of distrust evident in the exchange, with most collector agents being perceived to be untrustworthy and to have a poor reputation. Although there was regular communication between the collector agents and farmers, market information was rarely exchanged and most collector agents were not able to provide technical advice.

On the other hand, most collector agents were able to purchase coffee all year round and to extend credit to the farmers. Being located geographically close to the farmers, most collector agents were able to meet the farmers' immediate needs.

When asked why they did not transact with local collector agents, farmers indicated that the main reason was the inability of the collector agents to meet the farmers' price expectations (47%) or to provide them with a fair price (32%) (Table 6.6). Some collector agents had a poor business reputation (22%) and for others, there was

an element of distrust (6%) inherent in their transactions, with some collector agents perceived as presenting an unacceptable level of risk (10%). For 15% of the farmers, they preferred to sell their coffee to other buyers who offered a higher price.

Table 6.6. Reasons farmers gave to explain why they did not deal with the collector agents

Responses*	Frequency (n=68)	Percentage
Lower price/ cheap price/ do not meet my price requirement	32	47.0
Price pressure/ unfair price	22	32.3
Low business reputation	15	22.0
Sell to people who pay a higher price/ sell when the buyer pays a good price	10	14.7
Lower profit	8	11.7
High risk/ the buyer does not pay their debt	7	10.2
Unstable price	5	7.3
Do not provide price information	5	7.3
No trust	4	5.8
Purchase small volume/ cannot purchase a large volume	3	4.4
Do not measure coffee moisture level correctly	3	4.4
Have no respect for the initial price agreement	3	4.4
High interest rate	2	2.9
Do not pay on time	1	1.5

**Multiple responses*

For those farmers who had somewhat larger landholdings (more than 5 ha), they preferred to deal directly with traders because of their ability to purchase coffee in larger quantities all year round. In their transactions with traders, farmers indicated that most traders were able to purchase all the coffee they had produced at a fair price. As there was often a great deal of uncertainty and volatility in the market price, payment often occurred several weeks after the delivery (Table 6.7). However, most traders were unable to extend credit and in being geographically distant from the farmers, were unable to meet their immediate needs. Additionally, most traders did not communicate with the farmers on a regular basis; hence the exchange of both market and technical information was poor. It is worth noting though that most traders were perceived to be trustworthy and to have a good business reputation.

Table 6.7. Criteria the farmers required and the extent to which the downstream traders met these criteria

Criteria	Farmer expect[1]		Farmer receive[2]		Sig.
	Mean	SD	Mean	SD	
pays on time	5.19	0.798	4.14	1.106	0.000
has a good business reputation	5.19	0.900	4.92	0.702	0.070

provides me with a fair price	5.05	0.899	4.98	0.864	0.089
is trustworthy	4.85	0.887	4.81	0.601	0.799
rewards me for good quality	4.81	0.900	4.66	0.477	0.182
we have a long-standing/ good relationship	4.81	0.973	4.61	0.588	0.141
able to purchase my coffee all year round	4.59	0.853	4.66	0.659	0.666
offers credit	4.54	0.934	4.18	0.625	0.000
is geographically close to me	4.08	0.761	3.75	0.756	0.000
provides technical information/ advice	3.61	1.034	2.90	0.078	0.000
provides market information	3.54	0.988	2.68	0.880	0.000
is willing to meet my immediate needs	3.31	0.650	2.92	0.605	0.001
communicates regularly	3.31	0.933	2.98	0.394	0.000
can transport coffee from my farm	3.07	0.740	2.90	0.595	0.047

[1] where 1 is "not at all important" and 6 is "very important"
[2] where 1 is "not at all well" and 6 is "very well"

The five most frequently cited reasons that farmers gave for not transacting with a trader was the fact that they already had a loan with a collector agent (27%) (the lack of capital to invest in the crop), the trader's distance from the farm (23%), the trader's inability to meet the farmers' price expectations (21%) and the requirement for the farmers to pay the transport cost to the trader's warehouse (18%) (Table 6.8).

Table 6.8. Reasons the farmers gave to explain why they did not deal with traders

Responses*	Frequency (n=158)	Percentage
Have an agreement/ loan with collectors	43	27.2
Not close to my house/ inconvenience	37	23.4
Traders do not meet the price agreement	33	20.8
Have to pay for transport cost	29	18.3
Unstable price	26	16.5
Price is the same for all coffee (even bad or good)	25	15.8
Pay at a lower market price/ unreasonable price	24	15.2
Produce small volume	20	12.6
High risk (not get payment)	18	11.4
Do not meet traders' requirement	15	9.5
Have many inappropriate problems	13	8.2
Not high profits	10	6.3
Have other good buyers/ have a preferred buyer	7	4.4
Traders do not provide credit	6	3.8
Do not pay on time	5	3.2
Price pressure	3	1.9
Do not provide technical advice	2	1.3

**Multiple responses*

In addition, 16% of farmers indicated that they were dissatisfied with the instability in the prices paid to them by traders and the failure of the traders to reward them for producing good quality coffee (15%).

For some farmers, there was a risk of not being paid for the product (10%). A further 11% of farmers believed that they did not have enough volume to deal with traders and some 8% believed that they could not meet traders' requirements.

In transacting directly with companies, there were few gaps between what the farmers expected and what they actually received (Table 6.9). Farmers who sold coffee directly to companies were able to benefit from the services offered by the company such as purchasing all year round, grading, packaging and storage of the coffee, as well as the provision of technical information.

Table 6.9. Criteria the farmers required and the extent to which the downstream companies met these criteria

Criteria	Farmer expect[1]		Farmer receive[2]		Sig.
	Mean	SD	Mean	SD	
pays on time	5.21	0.787	4.26	1.046	0.010
provides me with a fair price	5.16	1.015	4.74	0.653	0.190
has a good business reputation	5.16	0.898	4.95	1.026	0.520
is trustworthy	5.11	0.809	4.95	0.621	0.268
rewards me for good quality	5.00	0.745	4.74	0.653	0.262
we have long-standing/ good relationship	4.89	0.875	4.63	0.684	0.350
offers credit	4.37	0.955	4.53	0.697	0.563
able to purchase my coffee all year round	4.26	0.991	4.53	0.697	0.350
provides technical information/ advice	3.84	0.765	4.95	0.848	0.000
provides market information	3.84	0.834	3.21	0.713	0.007
is geographically close to me	3.47	0.612	3.32	0.820	0.482
communicates regularly	3.42	0.769	3.53	0.749	0.133
is willing to meet my immediate needs	3.26	0.737	3.11	0.667	0.000
can transport coffee from my farm	2.68	0.703	2.63	0.850	0.163

[1] where 1 is "not at all important" and 6 is "very important"
[2] where 1 is "not at all well" and 6 is "very well"

As a result, those farmers trading with companies believed that they were being appropriately rewarded for producing good quality coffee and the prices being paid were commensurate with those prevailing in the international market. However, given the volatility in prices, payment was often delayed.

As those farmers transacting with companies were usually able to maintain a long-standing relationship, companies were perceived to be trustworthy and to possess a good business reputation. However, in spite of regular communication, most companies were perceived as being unable to provide reliable market information.

Although the companies provided farmers with the highest price, they required farmers' to make significant investments to both increase and to protect their crop

yield and quality. In situations where the farmers required credit to purchase inputs or to meet immediate needs, because of the long-term relationship established, most companies were willing to extend a loan to them.

Many different reasons were given to explain why the majority of farmers did not transact directly with the companies. The primary reasons were the small volume of coffee that farmers produced (37%), or their inability to meet the companies' requirements (31%). For 28% of farmers, no company was present in their coffee growing region and thus they had no experience in transacting directly with companies. For other farmers, there was a perception that companies only purchased from farmers when they needed to fill a container (19%). Others expressed their concerns about operating under a contract, the conditions of which were too difficult for many farmers to fulfil (15%). Some 10% of the farmers revealed their concerns about delays in payment, while 6% of them were worried of the possibility of the company going bankrupt (and thus failing to pay its suppliers) and the inability of the company to offer payment in advance (Table 6.10).

Table 6.10. Reasons the farmers gave to explain why they did not deal with companies

Responses*	Frequency (n=198)	Percentage
Just have enough amount to sell to the main buyer	73	36.9
Do not meet the company's requirements	62	31.3
Have no local company/ never cooperated with a	55	27.8
Unstable buying/buy when needs to fill a container	37	18.7
Pressure to follow contract conditions	29	14.6
Slow payment/ pay late	20	10.1
Do not purchase from farmer	15	7.6
Risky (financially unsecure)	12	6.0
Price pressure	11	5.5
Only small scale coffee production	8	4.0
Do not pay in advance	7	3.5
Suppliers have to deliver to the company/ long distance	5	2.5
Contract conditions do not benefit the supplier	5	2.5
Purchase large volume	4	2.0
I prefer to sell to other as company have high requirement	2	1.0
Do not keep their promise	1	0.5

**Multiple responses*

To compare the extent as to which group of buyers were better able to meet the farmers' requirements, a comparison between what the farmers received from each group of buyers was undertaken. The results of the Fisher's least significant difference (LCD) analysis showed that among the alternative buyers, collector agents

were the most preferred by the farmers. Being located in close proximity to the farmers, most farmers had a long-standing relationship with their preferred collector agents. Collector agents were able to purchase coffee all year round, but while they generally paid on time, they were the least able to provide a competitive price (Table 6.11).

Table 6.11. Differences in the extent to which each 'most preferred buyer' met the farmers' expectations (CA = collector agents, T = traders, C = companies)

Criteria	Farmer perceive from			
	CA	T	C	Sig.
pays on time	5.01[b]	4.14[a]	4.26[a]	**0.000**
we have a long-standing/ good relationship	4.87[a]	4.61[a]	4.63[a]	0.052
able to purchase my harvested coffee all year	4.85[a]	4.66[a]	4.53[a]	0.061
is trustworthy	4.73[a]	4.81[a]	4.95[a]	0.331
is geographically close to me	4.68[b]	3.75[a]	3.32[a]	**0.000**
offers credit	4.54[b]	4.18[a]	4.53[b]	**0.034**
rewards me for good quality	4.05[a]	4.66[b]	4.74[b]	**0.000**
communicates regularly	3.98[c]	2.98[a]	3.53[b]	**0.000**
has a good business reputation	3.60[a]	4.92[b]	4.95[b]	**0.000**
is willing to meet my immediate needs	3.30[c]	2.92[a]	3.11[b]	**0.000**
can transport coffee from my farm	3.13[c]	2.90[b]	2.63[a]	0.224
provides me with a fair price	3.02[a]	3.63[b]	4.74[c]	**0.000**
provides market information	2.99[a]	3.68[b]	3.21[a]	**0.000**
provides technical information/ advice	2.97[a]	3.90[b]	4.95[c]	**0.000**

where 1 is "not at all well" and 6 is "very well"
where those items with the same superscript in the same row are not significantly different at p = 0.05

For those farmers who had a larger quantity of coffee and were in close proximity to the companies, those farmers who transacted directly with companies were the most satisfied with the prices that were paid. As most of the farmers who transacted with the companies were contracted and had to meet very demanding quality specifications, the companies were willing to offer technical advice and were more likely to communicate with farmers on a regular basis. However, payments from both traders and companies were generally deferred. Although collector agents generally paid cash when they collected the coffee, they were the most reluctant of the market intermediaries to provide market information.

6.3 What downstream buyers expect from their upstream suppliers

This section is organised into four parts. In the first part, what the collector agents expect from their upstream suppliers is identified. The following parts then explore what the traders and companies expected from their upstream suppliers. Finally, a comparison of what market intermediaries expect from their upstream suppliers is made.

6.3.1 What do the collector agents expect from their upstream suppliers?

In choosing those suppliers from whom they wished to purchase coffee, the most frequently cited criteria given by collector agents were: a good cultivation technique for producing coffee (45%); a competitive price (41%); good quality (39%); and a good business reputation (35%) (Table 6.12).

Table 6.12. Criteria used by the collectors when deciding whom they will purchase coffee from

Responses*	Frequency (n=54)	Percentage
Have experience to grow coffee/ good cultivation technique	24	44.4
Acceptable price/ follow market price	22	40.7
Good quality	21	38.9
Good business reputation/ prestige	19	35.1
Moisture level is accepted	17	31.5
Have good-looking coffee	12	22.2
Have a long-term relationship and transaction/ good	10	18.5
Low rate of foreign matter	9	16.7
Consistent and sufficient trading volume	8	14.8
Can make profit	8	14.8
Easy to buy/ can bargain	7	13.0
Meet their demand	5	9.2
Geographically close/ easy to transport to their place	3	5.5
Lower broken coffee ratio	3	5.5
Accept payment after selling/ sold on credit	2	3.7
Willing to share risk/ help each other	1	1.8
Trustworthy/ honest/ loyal and faithful	1	1.8
No price pressure	1	1.8

**Multiple responses*

6.3.2 What do collector agents expect from their upstream suppliers?

Collector agents preferred to transact with those farmers with whom they had developed a good relationship (19%). The relational criteria were important as collector agents generally paid the farmers in advance (give credit) and the sale price

was negotiated at the time the purchase agreement was made. The farmers then had to sell their coffee to collector agents after harvesting and primary processing to repay the debt. To ensure a reliable supply, collector agents were more likely to transact with those farmers who could supply coffee in a sufficient and consistent quantity (15%)

Due to the larger volumes of coffee that they handled, traders and companies were able to grade and separate the better quality coffee. As a result, farmers perceived that both traders and companies were better able to reward them for producing good quality coffee. Furthermore, companies were perceived as being better able to extend credit to farmers and to have a better business reputation

6.3.3 What do the traders expect from their upstream suppliers?

From the traders' perspective, the situation was very similar. Some 28% of traders were concerned about sourcing good quality coffee from reputable suppliers, with an additional 25% citing the need to secure a sufficient supply of good quality coffee that was competitively priced (Table 6.13).

Table 6.13. Criteria used by the traders in deciding whom they will purchase coffee from

Responses*	Frequency (n=32)	Percentage
Good business reputation/ prestige	9	28.1
Good quality	9	28.1
Got enough trading volume	8	25.0
Reasonable price/ follow market price	8	25.0
Have good-looking coffee	7	21.8
Have a long-term relationship/ good relationship	6	18.7
Reliable supply/ have a stable source	6	18.7
Accept payment after selling/ sold on credit	5	15.6
Low level of impurities	5	15.6
Dryness desired	4	12.5
Trustworthy/ honest/ loyal and faithful	4	12.5
Have a large volume	3	9.4
Meet my demand	2	6.2
Share risk	1	3.1
Stable price/ less price movement	1	3.1
Easy to contact/ easy to buy/ can bargain	1	3.1
Geographically close/ easy to transport to my place	1	3.1

**Multiple responses*

In terms of the relational criteria, 28% of the traders preferred to transact with suppliers who had a good reputation and with whom they had developed a good relationship (19%). Traders preferred to transact with suppliers who were able to provide a reliable supply (19%). However, from the traders' perspective, upstream suppliers needed to be flexible with their pricing (25%) as traders had to adjust their prices daily and even throughout the day, depending on the prevailing market price. Moreover, farmers and collector agents had to accept the traders' terms of payment (16%), which were generally one to two weeks after the sale of the coffee to downstream customers. In this manner, the traders were able to manage price risk and uncertainty.

6.3.4 What do the companies expect from their upstream suppliers?

On the other hand, companies preferred to deal with those suppliers who could offer a reasonable price (50%). Most companies required good quality (50%), good-looking coffee (43%), with a low level of impurities (43%). They preferred to transact with reputable suppliers (43%) who were able to deliver coffee reliably and consistently (36%). Companies were the first of the market intermediaries to express some concern about the origin of the coffee (14%) (Table 6.14).

6.3.5 What do the market intermediaries expect from their upstream suppliers?

To identify if there was any gap between what farmers perceived their downstream buyers required and what their downstream buyers actually required, farmers were asked to respond to 19 prepared statements based on a review of the literature. In a similar manner, each market intermediary was asked to indicate how important the same 19 statements were in their decision to purchase coffee from upstream suppliers.

The results of the Fisher's least significant difference (LSD) analysis showed that farmers perceived that downstream buyers preferred to transact with suppliers who could provide good quality coffee that had been harvested at the desired stage of maturity, was good looking and well dried. Preferred suppliers were perceived to

have a good business reputation, to be trustworthy and to have the ability to provide coffee that was competitively priced (Table 6.15).

Table 6.14. Criteria used by the companies in deciding whom they will purchase coffee from

Responses*	Frequency (n=14)	Percentage
Reasonable price/follow market price	7	50.0
Good quality/ have a high quality ratio	7	50.0
Have good looking coffee	6	42.8
Reputation/ prestige	6	42.8
Low level of impurities/dryness desired	6	42.8
Have a stable source	5	35.7
Early delivery/ deliver exact quantity/ reputation in delivery	5	35.7
Meet my demand/ immediate needs	5	35.7
Trustworthy / honest/ loyal and faithful	5	35.7
Have a long-term relationship/good relationship	5	35.7
Geographically close/easy to transport to my place	4	28.5
Accept payment after selling/sold on credit	4	28.5
Easy to contact/ easy to buy/can bargain	4	28.5
Have a large volume	3	21.4
Inform the quality of coffee, adjust the price if bad quality	2	14.2
Know the product origin	2	14.2
Have a sufficient trading volume	2	14.2
Low waste ratio	1	7.1
No need to bargain	1	7.1

**Multiple responses*

Table 6.15. Importance of purchase criteria between alternative actors (F = farmers, CA = collector agents, T = traders, C = company)

Criteria	F	CA	T	C
have a good business reputation	5.05^{a}	5.11^{a}	5.13^{a}	4.64^{a}
provide coffee that is competitively priced	5.02^{a}	5.06^{a}	5.09^{a}	5.14^{a}
reliable supplier (trust)	5.02^{a}	4.89^{a}	4.94^{a}	4.57^{a}
have a long-standing relationship	4.89^{a}	5.09^{a}	4.97^{a}	4.71^{a}
have coffee with the right maturity	4.76^{b}	4.89^{a}	4.94^{a}	5.00^{a}
have coffee that is well dried	4.75^{b}	4.24^{b}	4.28^{b}	4.14^{c}
have coffee in the desired quality	4.70^{b}	5.06^{a}	5.06^{a}	5.07^{a}
have coffee that is good looking	4.64^{b}	4.09^{c}	4.19^{b}	4.00^{c}
have large coffee beans	4.52^{c}	4.33^{b}	4.28^{b}	4.00^{c}
be able to give credit (deferred payment)	4.38^{c}	4.67^{b}	4.53^{b}	4.71^{a}
have coffee that stores well	4.35^{c}	3.30^{e}	3.47^{d}	3.50^{d}
have coffee that is free of physical defects	4.23^{d}	4.17^{c}	4.22^{b}	4.21^{b}
be willing to meet their immediate needs	4.17^{d}	4.69^{b}	4.72^{a}	4.93^{a}
have coffee that is free of foreign matter	4.09^{d}	4.33^{b}	4.31^{b}	4.21^{b}
provide large quantities of coffee	3.79^{e}	4.13^{c}	5.00^{a}	5.07^{a}
have coffee that is well graded	3.85^{e}	3.39^{d}	4.47^{b}	4.93^{a}
ability to deliver coffee when required	3.86^{e}	3.80^{d}	3.84^{c}	4.21^{b}
have coffee that is free of pests and	3.38^{f}	3.44^{d}	3.47^{d}	4.07^{c}

have a contract	1.71[g]	1.94[f]	2.53[e]	3.57[d]

where 1 = "not at all important" and 6 = "very important"
where those items with the same superscript in the same column are not significantly different at p =0.05

As for the collector agents, when choosing between alternative suppliers, they placed more importance on the willingness of the suppliers to meet their immediate needs. Although collector agents generally purchased the coffee ungraded, they preferred to purchase large beans that were good looking and substantially free of foreign matter. Because of their inability to extend large amounts of credit, collector agents expected their upstream suppliers to accept their deferred terms of payment.

For the traders, the key point of difference was the desire to purchase a larger quantity of good quality, well graded coffee. Greater emphasis was given to the physical quality dimensions of the coffee, including the size of the bean, as well as the absence of foreign matter and physical defects.

For the companies, their primary consideration was the offer quality: the ability of their upstream suppliers to deliver a sufficient quantity of competitively priced good quality coffee of the desired maturity. In comparison to the farmers, collector agents and traders, the relational constructs were significantly less important for the companies.

From the farmers' perspective, it was evident that the farmers placed a great deal of importance on having parchment that was well dried and stored well, as well as having beans that were large and good-looking.

However, it was evident that the farmers did not rate the importance of meeting the market intermediaries' immediate needs as highly as they should. For the traders and companies, there was a perceived need to deliver a large quantity of good quality coffee that had been well graded and of particular importance for the exporters, to provide parchment that was free of pests and diseases. Table 6.16 describe the results of the Fisher's least significant difference (LSD) analysis.

Table 6.16. Differences between farmers' perceptions and the criteria the downstream buyers use when choosing between alternative suppliers (F = farmers, CA= collector agents, T= traders, C = company)

Criteria	F	CA	T	C
have a good business reputation	**5.05^{b}**	**5.11^{b}**	**5.13^{b}**	**4.64^{a}**
reliable supplier (trust)	**5.02^{b}**	**4.89^{ab}**	**4.94^{ab}**	**4.57^{a}**
provide coffee that is competitively price	5.02^{a}	5.06^{a}	5.09^{a}	5.14^{a}
have a long-standing relationship	4.89^{a}	5.09^{a}	4.97^{a}	4.71^{a}
have coffee with the right maturity	4.76^{a}	4.89^{a}	4.94^{a}	5.00^{a}
have coffee that is well dried	**4.75^{b}**	**4.24^{a}**	**4.28^{a}**	**4.14^{a}**
have coffee of the desired quality	4.70^{a}	5.06^{a}	5.06^{a}	5.07^{a}
have coffee that is good-looking	**4.64^{b}**	**4.09^{a}**	**4.19^{a}**	**4.00^{a}**
have large coffee beans	**4.52^{b}**	**4.33^{ab}**	**4.28^{ab}**	**4.00^{a}**
be able to give credit (deferred payment)	4.38^{a}	4.67^{a}	4.53^{a}	4.71^{a}
have coffee that stores well	**4.35^{b}**	**3.30^{a}**	**3.47^{a}**	**3.50^{a}**
have coffee that is free of physical defects	4.23^{a}	4.17^{a}	4.22^{a}	4.21^{a}
be willing to meet their immediate needs	**4.17^{a}**	**4.69^{b}**	**4.72^{b}**	**4.93^{b}**
have coffee that is free of foreign matter	4.09^{a}	4.33^{a}	4.31^{a}	4.21^{a}
ability to deliver coffee when required	3.86^{a}	3.80^{a}	3.84^{a}	4.21^{a}
have coffee that is well graded	**3.85^{a}**	**3.39^{a}**	**4.47^{b}**	**4.93^{b}**
provide large quantities of coffee	**3.79^{a}**	**4.13^{a}**	**5.00^{b}**	**5.07^{b}**
have coffee that is free of pests and diseases	**3.38^{a}**	**3.44^{a}**	**3.47^{a}**	**4.07^{b}**
have a contract	**1.71^{a}**	**1.94^{a}**	**2.53^{b}**	**3.57^{c}**

where 1 = "not at all important" and 6 = "very important"

where those items with the same superscript in the same row are not significantly different at p =0.05

6.4 Extent to which the market intermediaries' preferred upstream suppliers met their requirement criteria

This section is comprised of three parts. Each part examines the difference between each downstream buyer's expectations and their preferred upstream suppliers' ability to meet those expectations.

6.4.1 Extent to which the collector agents' preferred upstream suppliers met their requirement criteria

From the collector agents' perspective, farmers were generally unable to provide coffee of the desired quality, reliably and consistently. Collector agents were often dissatisfied with the quality of the coffee farmers offered in that it had not been harvested at the desired level of maturity, it had not been appropriately dried, it was not good-looking and it often contained a high level of foreign matter (Table 6.17).

Table 6.17. Criteria the downstream collector agents required and the extent to which the farmers met these criteria

Criteria	Collector expect[1]		Collector receive[2]		Sig.
	Mean	SD	Mean	SD	
Good business reputation	**5.11**	**0.538**	**4.46**	**0.573**	**0.000**
Long-standing relationship	5.09	0.734	4.91	0.622	0.151
Desired quality	**5.06**	**0.685**	**3.65**	**0.974**	**0.000**
Competitively priced	5.06	0.685	4.87	0.616	0.124
Right maturity	**4.89**	**0.744**	**3.11**	**0.925**	**0.000**
Reliable supplier	**4.89**	**0.744**	**4.09**	**0.976**	**0.000**
Meet immediate needs	**4.69**	**0.696**	**4.28**	**0.899**	**0.006**
Give credit	**4.67**	**0.801**	**3.09**	**0.896**	**0.000**
Free of foreign matter	**4.33**	**0.583**	**4.04**	**0.726**	**0.004**
Size desired	4.33	0.583	4.28	0.685	0.666
Dryness desired	**4.24**	**0.823**	**3.83**	**0.466**	**0.002**
Free of physical defects	4.17	0.637	4.09	0.351	0.470
Large quantities	**4.13**	**0.870**	**3.24**	**0.970**	**0.000**
Good looking	**4.09**	**0.591**	**3.57**	**0.499**	**0.000**
Deliver when required	**3.80**	**0.786**	**3.33**	**0.673**	**0.002**
Free of pets and diseases	3.44	0.664	3.65	0.705	0.168
Well graded	**3.39**	**0.712**	**2.61**	**0.787**	**0.000**
Store well	3.30	0.603	3.17	0.505	0.266
Have a contract	**1.94**	**0.763**	**3.06**	**0.712**	**0.000**

[1] where 1 is "not at all important" and 6 is "very important"

[2] where 1 is "not at all well" and 6 is "very well"

Although grading was of little importance to collector agents (because they generally purchase the coffee, accumulate it and resell it to traders and companies who have their own grading systems), they were often disappointed with what they received from farmers.

In spite of the close proximity of the farmers to collector agents, farmers could not be relied upon to fulfil the collector agents' immediate needs or to deliver the anticipated quantity of coffee when it was required.

6.4.2 Extent to which the traders' preferred upstream suppliers meet their requirement criteria

For the traders, it is evident that most farmers were unable to deliver coffee of the desired quality, reliably and consistently. Not only was the coffee delivered contaminated with foreign materials, it was seldom of the desired maturity. Traders indicated that coffee which had been harvested prematurely to avoid theft was more likely to cause problems for downstream buyers (Table 6.18).

Table 6.18. Criteria the downstream traders required and the extent to which the farmers met these criteria

Criteria	Trader expect[1]		Trader receive[2]		Sig.
	Mean	SD	Mean	SD	
Desired quality	**5.44**	**0.527**	**4.22**	**0.667**	**0.010**
Large quantities	**5.11**	**0.601**	**4.44**	**0.527**	**0.022**
Competitively priced	5.11	0.782	4.78	0.441	0.195
Reliable supplier	**5.00**	**1.118**	**4.22**	**0.441**	**0.043**
Good business reputation	5.00	0.707	4.67	0.707	0.438
Long-standing relationship	4.89	0.333	4.44	0.527	0.195
Right maturity	**4.78**	**0.667**	**4.11**	**0.333**	**0.050**
Meet immediate needs	**4.67**	**0.500**	**3.78**	**0.441**	**0.009**
Give credit	**4.67**	**0.707**	**4.00**	**0.707**	**0.050**
Size desired	4.56	0.882	4.22	0.833	0.438
Free of pets and diseases	4.56	0.726	4.11	0.333	0.169
Dryness desired	4.44	1.014	4.22	0.441	0.512
Store well	4.44	0.527	4.11	0.782	0.282
Good looking	4.33	0.866	4.00	0.500	0.347
Deliver when required	4.00	0.500	3.78	0.441	0.447
Free of foreign matter	3.89	0.928	3.78	0.441	0.435
Free of physical defects	3.44	1.424	3.22	0.441	0.174
Well graded	**3.44**	**0.527**	**2.33**	**0.500**	**0.003**
Have a contract	**2.22**	**0.441**	**3.11**	**0.928**	**0.022**

[1] where 1 is "not at all important" and 6 is "very important"

[2] where 1 is "not at all well" and 6 is "very well"

At the traders' level, purchasing coffee that had been appropriately graded was important in order to meet the needs of their more discerning downstream customers. Otherwise, traders would have to regrade the coffee before selling it to companies, and not all traders had the capacity to do this.

As traders act as consignment agents, they have no idea as to the volume of coffee they might receive on a particular day. To minimise the risk, payment was usually delayed several weeks after the sale had been made. Generally, where the quality was poor, if the traders' customers were dissatisfied and the traders found it necessary to reduce the price, a lower price would be paid to the farmers. While some farmers were willing to share that risk, others were not.

Traders could purchase coffee not only from farmers but also from collector agents. Looking at what the traders received from each alternative supplier, it was evident that the traders preferred to transact with collector agents, given their superior capacity to deliver a greater volume of coffee and in some instances, to deliver coffee of the desired quality. As collector agents were more experienced in

choosing and grading coffee, it was easier to sell their coffee to companies, rather than farmers (Table 6.19).

Table 6.19. Performance of traders' most preferred suppliers (F = farmers, CA = collector agents)

Criteria	What traders receive[1] from		
	F	CA	Sig.
Competitively priced	4.78	4.83	0.347
Good business reputation	**4.67**	**4.96**	**0.021**
Large quantities	**4.44**	**4.91**	**0.035**
Long-standing relationship	**4.44**	**5.00**	**0.050**
Desired quality	**4.22**	**4.87**	**0.022**
Free of physical defects	4.22	4.35	0.347
Dryness desired	4.22	4.26	0.169
Size desired	4.22	4.65	0.088
Reliable supplier	4.22	4.65	0.139
Right maturity	4.11	4.26	0.195
Store well	4.11	4.13	0.397
Free of pets and diseases	4.11	4.52	0.347
Good looking	4.00	4.43	0.195
Give credit	4.00	4.22	0.081
Free of foreign matter	**3.78**	**4.65**	**0.000**
Meet immediate needs	**3.78**	**4.30**	**0.035**
Deliver when required	**3.78**	**4.74**	**0.000**
Have a contract	**3.11**	**3.83**	**0.040**
Well graded	**2.33**	**4.43**	**0.000**

[1] where 1 is "not at all well" and 6 is "very well"

Furthermore, collector agents generally had a better business reputation. As they were more capable of meeting the traders' immediate needs, collector agents could be relied upon to deliver coffee when the traders required it. Transacting with collector agents was generally a less risky proposition.

6.4.3 Extent to which the companies' preferred upstream suppliers meet their requirement criteria

While most smallholder coffee farmers were generally unable to meet the companies' needs, those who did have the capacity to trade directly with companies experienced major problems such as the inability to deliver a sufficient quantity of well graded coffee when it was required (Table 6.20).

Table 6.20. Criteria the downstream company required and the extent to which the farmers met these criteria

Criteria	Company expect[1]		Company		Sig.
	Mean	SD	Mean	SD	
Good business reputation	5.67	0.577	4.67	0.577	0.225

Large quantities	**5.33**	**0.577**	**3.67**	**0.577**	**0.038**
Well graded	**5.33**	**0.577**	**3.67**	**0.577**	**0.038**
Competitively priced	5.33	0.577	4.67	0.577	0.184
Desired quality	5.00	1.000	4.00	0.000	0.225
Right maturity	5.00	1.000	4.00	0.000	0.225
Deliver when required	**5.00**	**0.000**	**3.33**	**0.577**	**0.038**
Long-standing relationship	5.00	1.000	4.00	0.000	0.225
Free of physical defects	4.67	0.577	4.33	0.577	0.423
Free of foreign matter	4.67	0.577	4.33	0.577	0.423
Good looking	4.67	0.577	4.33	0.577	0.423
Size desired	4.67	0.577	4.00	1.000	0.529
Meet immediate needs	4.67	1.155	3.67	0.577	0.423
Reliable supplier	4.67	1.155	4.33	0.577	0.742
Store well	4.67	0.577	3.33	0.577	0.184
Dryness desired	4.33	0.577	4.00	0.000	0.423
Have a contract	4.33	0.577	3.33	1.155	0.423
Give credit	4.00	1.000	3.00	0.577	0.423
Free of pets and diseases	4.00	0.000	3.67	0.577	0.423

[1] where 1 is "not at all important" and 6 is "very important"

[2] where 1 is "not at all well" and 6 is "very well"

After considering all criteria, when comparing the performance of the farmers, collector agents and traders in meeting the companies' needs, it was found from the result of One-way ANOVA analysis that the traders were best able to meet the companies' needs (Table 6.21). Not surprisingly, farmers were the least able to deliver a sufficiently large quantity of good quality coffee, reliably and consistently. While the companies maintained a good relationship with those farmers who were able to meet their needs, they generally put more effort into maintaining relationships with their preferred traders.

Table 6.21. Assessment of the most preferred suppliers by the companies (F = farmers, C = collector agents, T = traders, C = other companies)

Criteria	Companies receive from				
	F	CA	T	C	Sig.
Competitively priced	4.67^{a}	4.75^{a}	4.60^{a}	4.50^{a}	0.956
Good business reputation	4.67^{a}	4.50^{a}	4.80^{a}	5.00^{a}	0.673
Free of physical defects	4.33^{a}	4.50^{a}	4.60^{a}	4.50^{a}	0.178
Free of foreign matter	4.33^{a}	4.50^{a}	4.60^{a}	4.50^{a}	0.939
Good looking	4.33^{a}	4.25^{a}	4.80^{a}	4.50^{a}	0.657
Reliable supplier	4.33^{a}	4.50^{a}	4.80^{a}	4.50^{a}	0.818
Desired quality	**4.00^{a}**	**4.25^{ab}**	**5.20^{b}**	**5.00^{b}**	**0.005**
Right maturity	4.00^{a}	4.00^{a}	4.40^{a}	4.50^{a}	0.761
Dryness desired	4.00^{a}	4.00^{a}	5.00^{a}	5.00^{a}	0.087
Size desired	4.00^{a}	4.25^{a}	4.60^{a}	4.50^{a}	0.824
Long-standing	**4.00^{a}**	**3.75^{a}**	**5.00^{b}**	**4.50^{a}**	**0.002**
Large quantities	**3.67^{a}**	**4.50^{ab}**	**5.40^{b}**	**5.50^{b}**	**0.012**

Well graded	**3.67[a]**	**3.75[ab]**	**4.60[ab]**	**5.00[b]**	**0.026**
Meet immediate needs	3.67[a]	4.50[a]	4.00[a]	4.50[a]	0.131
Free of pets and diseases	3.67[a]	4.00[a]	4.20[a]	4.50[a]	0.244
Deliver when required	**3.33[a]**	**3.75[ab]**	**4.60[b]**	**4.00[a]**	**0.034**
Store well	3.33[a]	3.50[a]	4.20[a]	4.50[a]	0.077
Have a contract	3.33[a]	3.50[a]	3.40[a]	3.50[a]	0.995
Give credit	**3.00[a]**	**3.50[ab]**	**4.40[b]**	**4.50[b]**	**0.012**

where 1 is "not at all well" and 6 is "very well"

those values with the bolded figures represent significance at p = 0.05

where those items with the same superscript in the same row are not significantly different at p =0.05

Given the inability of the farmers, collector agents and traders to supply a sufficient quantity of good quality coffee, it was evident that from time to time, a significant amount of trade occurred between the companies themselves. While other companies offered the best quality coffee, they could not always be relied upon to deliver coffee when the focal company required additional coffee to fill an order.

6.4.4 Reasons which prevented the suppliers from meeting their downstream buyers' needs

In this part, the reasons that prevented the suppliers from meeting their downstream customers' needs were examined. At the farm level, the variability in quality (28%), climate change (24%), and poor productivity (20%) were the most frequently cited reasons (Table 6.22).

Table 6.22. What prevents the suppliers from meeting their downstream buyers' needs (%) (F = farmers, CA= collector agents, T= traders)

Factors	F	CA	T
Low quality/ quality is not good enough/ not meet quality	27.6	20.3	46.8
Unfavourable climate/ bad weather/ lack of rain	23.5	5.5	
Produce unstable volume/ limited productivity	19.8	3.7	
Poor productivity/ poor cultivation technique	14.2		
Unreasonable price/ price fluctuation	9.7	25.9	
Inappropriately dried	7.3	14.8	
Lack of capital	6.4		
Theft	5.5		
Lack of quality standard	3.6		
Price pressure	3.2		
Coffee tree too old	3.2		
Pest and disease problems	2.3		
Degenerated/ Infectious land	1.8		
Ungraded coffee	1.8		
Failure of crops	1.8		
Slow payment	1.3	5.5	18.7
Lack of trust together/ reputation	1.3	5.5	3.1
Insufficient infrastructure	1.3		
Depend on my preferred buyer	1.3		
High input cost	0.9		

No contact	0.5		
Farm located in rural area	0.5		
Do not want to give an opinion	0.5		
Pay for transport cost	0.5		
Unstable buying/ transaction/ demand		7.4	15.6
Late delivery		7.4	
High competition from other buyers		7.4	6.2
Total number of respondents	*217*	*54*	*32*

For the collector agents, price instability (26%), the variability in quality (20%) and wet parchment (15%) were seen as the major constraints, whereas for the traders, the variation in quality (47%), slow payment from buyers (19%) and the uncertain or unstable demand (16%) were the main reasons given to explain why they were unable to meet their downstream buyers' needs.

6.5 What upstream suppliers expect from their preferred downstream buyers

6.5.1 What collector agents expect from their preferred downstream buyers

In choosing between alternative buyers, collector agents preferred to transact with those buyers with whom they had developed a long-term relationship (28%), who paid a high price (28%), were willing to pay in full (15%) and were on time with their payments (15%). To ensure they had a buyer for the coffee they had purchased, collector agents preferred to transact with those buyers who purchased coffee from them all year round (9%) (Table 6.23).

Table 6.23. Criteria used by the collectors in deciding whom they will sell their product to

Responses*	Frequency (n=54)	Percentage
Long-standing relationship	15	27.8
Pay high price/ good price/ acceptable price	15	27.8
Reputation/ reliable	13	24.1
Pay cash immediately and pay in full	8	14.8
Pay on time	8	14.8
Purchase all year round/ stable buying	5	9.2
Meet buyers' quantity and quality/ meet suppliers' needs	4	7.4
Easy buying/ do not require quality standard	3	5.5
No risk/ safe	2	3.7
Have trust/ loyalty	1	1.8
Stable price	1	1.8
Selling quickly/ sell all their products	1	1.8
Have no other buyers/ suppliers	1	1.8
Save cost	1	1.8

**Multiple responses*

6.5.2 What traders expect from their preferred downstream buyers

Traders reflected a strong desire to transact with buyers who were willing to purchase all year round (31%) and in large volumes (28%). In addition, the traders preferred to transact with those buyers who had a good business reputation (28%) and with whom they had developed a good long-term relationship (25%). As the traders sold primarily on consignment, they preferred to transact with buyers who paid a good price (18%), were on time with their payments (15%) and who paid in full (13%) (Table 6.24).

Table 6.24. Criteria used by traders in deciding whom they will sell their product to

Responses*	Frequency (n=32)	Percentage
Purchase all year round	10	31.2
Have a good business reputation	9	28.1
Large volume exchange	9	28.1
Long-standing relationship/ transaction	8	25.0
Pay a high / good price	6	18.7
Pay on time	5	15.6
Pay cash immediately	4	12.5
No risk (never lost farmer money)	2	6.2
Have trust/ loyalty	2	6.2
Personal relationship/ easy-going/ understand my problems	1	3.1
Unstable buyer/ sell to who pay higher price	1	3.1
Stable price	1	3.1
Have good cooperation/ suitable agreement	1	3.1

**Multiple responses*

6.5.3 What collector agents and traders expect from their preferred downstream buyers?

Of the fourteen criteria that are believed to be the most influential in choosing between alternative buyers, collector agents placed the most importance on transacting with buyers that they trusted and who had the capacity to purchase coffee all year round at an acceptable price. These buyers generally had a good reputation for paying on time. In selecting alternative buyers, collector agents placed little importance on the capacity of downstream buyers to transport the coffee (Table 6.25).

Traders were similarly concerned about the business reputation of the buyers with whom they transacted. Trust and on-time payment were equally important. Traders

preferred to transact with buyers who were able to purchase coffee all year round at an acceptable price.

Table 6.25. Importance of purchase criteria between market intermediaries (CA = collector agents, T = traders)

Criteria	CA	T
pays on time	5.37[a]	4.72[b]
able to purchase my harvested coffee all year round	5.28[a]	5.27[a]
provides me with a fair price	5.11[a]	5.16[a]
has a good business reputation	5.02[a]	5.19[a]
is trustworthy	4.89[a]	4.56[b]
rewards me for good quality	4.59[b]	4.00[c]
have a long-standing/ good relationship	4.28[b]	3.19[f]
is geographically close to me	4.20[b]	3.38[e]
offers credit	4.19[b]	4.22[c]
provides market information	3.93[c]	4.38[c]
provides technical information/ advice	3.89[c]	3.88[d]
communicates regularly	3.63[d]	3.53[e]
is willing to meet my immediate needs	3.59[d]	3.13[f]
can transport coffee from my store	3.57[d]	3.94[d]

where 1 = "not at all important" and 6 = "very important"

results followed with the same letters in the same column show no significant difference detected by Turkey HSD at p =0.05

6.6 Extent to which the market intermediaries' preferred downstream buyers met their requirement criteria

6.6.1 Extent to which collector agents' preferred downstream buyers met their requirement criteria

The difference between what collector agents expected from their downstream buyers and what they actually received is examined in this section. The results reveal that there was no significant difference between what the collector agents received from traders or companies (Table 6.26).

6.6.2 Extent to which traders' preferred downstream buyers met their requirement criteria

Just as there was an element of trade taking place between the companies, it was also evident that there was an element of trade happening between the traders themselves. Between the traders, transactions were expected to be on an as-and-when-needed basis – traders would buy from other traders when they were not able to meet the needs of their downstream buyers. As such, these transactions were largely irregular and somewhat opportunistic. Furthermore, as a consequence, there

was no expectation of the need for any credit as transactions between traders were largely carried out in cash (Table 6.27).

Table 6.26. Assessment of the most preferred buyers by the collector agents (T = traders, C = companies)

Criteria	Collectors receive from		
	T	C	Sig.
able to purchase my harvested coffee all year round	5.29	5.14	0.604
provides me with a fair price	5.00	4.86	0.356
pays on time	4.29	4.57	0.457
rewards me for good quality	4.57	4.29	0.604
has a good business reputation	5.00	4.86	0.689
provides technical information/ advice	3.86	4.00	0.604
provides market information	4.00	3.71	0.569
offers credit	4.71	4.43	0.604
can transport coffee from my store	4.71	4.57	0.689
is willing to meet my immediate needs	3.86	3.57	0.172
is geographically close to me	4.57	4.29	0.356
have a long-standing/ good relationship	5.00	4.71	0.172
communicates regularly	3.71	3.57	0.689
is trustworthy	4.29	4.57	0.457

where 1 is "not at all well" and 6 is "very well"

those values with the bolded figures represent significance at p = 0.05

Table 6.27. Assessment of the most preferred buyers by the traders (T = other traders, C = companies)

Criteria	Traders receive from		
	Other T	C	Sig.
able to purchase my coffee all year round	**4.20**	**5.40**	**0.033**
provides me with a fair price	4.80	5.20	0.178
pays on time	4.40	5.00	0.305
rewards me for good quality	4.40	4.80	0.477
has a good business reputation	4.60	5.20	0.070
provides technical information/ advice	**3.60**	**4.60**	**0.034**
provides market information	3.60	4.40	0.099
offers credit	**3.40**	**4.60**	**0.004**
can transport coffee from my store	4.00	4.60	0.070
is willing to meet my immediate needs	3.80	4.40	0.070
is geographically close to me	4.40	4.20	0.374
have a long-standing/ good relationship	4.60	5.20	0.208
communicates regularly	3.80	4.40	0.070
is trustworthy	4.20	5.00	0.242

where 1 is "very well" and 6 is "not at all well"

those values with the bolded figures represent significance at p = 0.05

6.6.3 Reasons which prevented the buyers from meeting their upstream suppliers' needs

In a similar manner, the reasons which prevented buyers from meeting their upstream suppliers' needs were also examined. Both collector agents and traders agreed that

price instability was the major constraint that prevented them from meeting their upstream suppliers' needs. For the collector agents, slow payment (13%), a lower price (11%), unstable buyers (9%) and the lack of capital (9%) were secondary considerations (Table 6.28).

Table 6.28. What prevents the buyers from meeting their upstream suppliers' needs (%) (CA = collector agents, T= traders, C = company)

Factors	CA	T	C
Unstable price/ cannot predict the price	25.9	25.8	
Slow payment/ do not pay on time	12.9	9.3	7.1
Cheap price/ pay a lower price than the others	11.1	31.2	14.2
Unstable buyer	9.2		21.4
Lack of capital to pay cash immediately	9.2		7.1
Supplier has bad quality coffee	5.5	15.6	14.2
Require high quality coffee	5.5		7.1
Unsold/ limited capacity of selling	3.7	3.1	28.6
Price pressure	3.7		7.1
Not meet the price requirement	1.8		
Charge for high level of foreign matter	1.8		
High competition with others		6.2	14.2
No transport from the farm to my store		6.2	7.1
Unreliable/ not keep promise/ depend on profit		3.1	
Supplier stay too far away/ high transport cost		3.1	7.1
Long distance		3.1	7.1
Non-payment		3.1	
Purchase a large volume			14.2
Do not inform the quantity that they need/ unstable order			7.1
Do not frequently contact/ inform about market information			5.7
Total number of respondents	*54*	*32*	*14*

For the traders, the most frequently cited reason was the low price in the market that made it difficult for them to meet their supplier's expectations (31%). The traders also recognized that slow payment (9%) and non-payment from their downstream buyers (3%) made it difficult for them to pay their suppliers, which further led to dissatisfaction. The receipt of poor quality coffee from suppliers was also perceived to be a significant constraint (16%).

For the companies, their inability to sell the coffee they had processed and accumulated (29%) was a major impediment that impacted adversely on all upstream suppliers. Their capacity to do business with their upstream suppliers was limited by the intense price competition in the market (14%), low prices overall

(14%), the poor quality of the coffee delivered (14%) and their desire to purchase only large quantities of coffee (14%).

6.7 Chapter discussion

The results reveal that gaps exist in the nature of the trading relationship between each exchange partner. There were significant differences between what actors expected and what those same actors received in terms of price, quality and payment. Each actor often placed quite different weights on a wide range of the factors which they used to choose and evaluate their trading partners' performance. While farmers sought buyers that offered high prices and certain payment, downstream trading partners were more concerned about securing a reliable supply of good quality coffee at a low price.

In selecting exchange partners, farmers placed the most importance on transacting with those buyers who were willing to pay an acceptable price on time. In order to mitigate risk in the exchange, the farmers preferred to deal with those buyers who had a good business reputation and were considered trustworthy.

Nawi (2009) showed that farmers must align themselves with those customers whose needs they could best fulfil. By recognizing the gap between what their customers wanted and what they had to offer, farmers can exclude those market intermediaries whose needs they could not meet, thereby reducing the number of alternatives.

The majority of farmers did not trade with companies. Given their financial limitations and their inability to make the desired capital investments, most smallholder farmers were unable to participate in company supply chains.

This analysis of the different marketing channels available to smallholder farmers revealed that collector agents and traders were best suited to farmers for selling their coffee. However, the reasons influencing their choice were different. Most smallholder farmers transacted with collector agents because collector agents were able to give credit, buy cherry, take coffee all year round, their relaxed quality specifications. Smallholder farmers transacted with traders because of their ability to

perform all the marketing activities, the competitive price offered by traders, and also do not have financial relationship with collector agents.

Downstream buyers often chose to transact with more than one supplier in order to assure supply as there was an element of uncertainty in the market in relation to the quantity of coffee available and the quality of that coffee. This is consistent with Pal, Gupta, and Garg (2013) who suggested that the use of multiple suppliers provides greater flexibility and reduces supply uncertainty.

In their position, market intermediaries needed to have a sufficient quantity of a good quality coffee and to be able to offer these to downstream buyers at a competitive price. Potential suppliers had to meet the buyers' requirements for technical and functional quality over time, having proved themselves to be a reliable supplier, and having entered into a long-term relationship. This is consistency with the study of Nawi and Batt (2011a). From the market intermediaries' perspective, the major problems they experienced from all their suppliers were the inability to provide a large amount of coffee in a desired quality. For this reason, traders and companies purchased coffee from a multiple number of suppliers.

Generally, most companies preferred to transact with those suppliers who had coffee that met their perceived customer's requirements, e.g., had a good business reputation and offered the best quality coffee relative to other suppliers; kept their promises; and adhered to the agreement made between them to assure a consistent supply of good quality coffee. Although they purchased from many different upstream suppliers, traders were their preferred choice because they offered a large amount of coffee of the desired quality, reliably and consistently, at a competitive price. Most companies purchased coffee from traders because: (1) they were able to choose the coffee that they wanted from the large amount available; (2) coffee was available in sufficient quantities to meet their anticipated customers' needs; and (3) traders were best able to respond to the companies immediate needs and were willing to offer credit (if necessary). However, the companies were generally dissatisfied with the drying and grading of the coffee provided.

Due to the nature of agricultural products, the quality of the product influences its

price. Sometimes, purchasing from the cheapest suppliers may have the highest overall cost because of poor product quality and unreliable delivery. Every supplier along the value chain must understand the buyer's needs in terms of product quality to maximise the profit that can be extracted (Batt, 2006). This proposition is truly consistent with this study. Given the inherent variation in product quality and the risk associated in transacting with unknown and untested suppliers, the market intermediaries prefer to transact with reliable, trusted suppliers. Similarly, in facilitating the sale of their product to downstream buyers, farmers and market intermediaries prefer to transact with reliable, trusted customers. The supply chain participants show that by dealing with their preferred trading partner, uncertainty and risk are reduced.

Nevertheless, most coffee supply chains were characterized by the inability of farmers to deliver a consistent quality product to buyers. Poor quality was basically caused by poor cultivation techniques, pest and disease problems, poor postharvest handling, high input costs and limited access to finance. Furthermore, in the absence of appropriate storage facilities, the quality of coffee deteriorated quickly after harvest.

The inability of the farmers to meet the needs of their downstream market intermediaries could potentially exclude them from some markets, e.g., in order to sell coffee direct to companies, the farmers had to follow the prescribed cultivation technique provided by the companies.

Generally, the more activities that farmers performed the better able they were to fulfil their downstream customers' needs. The reason that farmers cannot meet the buyers' needs is that they do not have enough coffee. This does signal the potential need for agricultural cooperatives to overcome some of these impediments (Cadilhon et al. 2005; Rola-Rubzen et al. 2013).

Most farmers were able to harvest, dry, process, but some were not able to do so and they sold cherry to collector agents and transport (not all farmers have transport, and hence the need to trade with collector agents) their coffee to different buyers, but they seldom graded the coffee to the traders and companies satisfaction. When

market intermediaries did not provide the appropriate price signals, farmers continued to deliver ungraded coffee. As a result, there was no financial incentive to improve the quality of the coffee consigned to market.

From the buyers' perspective, it was apparent that there was a gap between what the buyer expected and what they received from sellers. For example, what collector agents expected and what they received from farmers is different. Although most collector agents operated locally and were geographically much closer to the farmers, farmers were generally unable to meet the collector agents' quality and quantity expectations. Most traders indicated that the farmers had difficulty in fulfilling their needs in terms of providing good quality coffee, in sufficient quantities, at a competitive price and delivering when their customers needed it. In most cases, farmers sold their coffee on consignment and received payment after the traders had on-sold the coffee to their customers. While most coffee farmers were able to meet the traders' needs, they were much less able to meet the companies' needs. In part, this was because of the small volumes of coffee they had available to sell to the companies. The companies only purchased directly from farmers when the farmer has a contract.

Companies prefer to purchase coffee from traders, and collector agents because they were able to meet their immediate requirements. It was easier for the companies to place an order, arrange delivery and arrange for payment. These are benefits that collector agents and traders provide to companies that farmers cannot.

The importance attached to the need for coffee to be appropriately graded depended on the intended customer. Given that collector agents generally purchase the coffee ungraded, grading is of little importance. Because the collector agents act only as market intermediaries, they seldom have the capacity to regrade coffee. Conversely, for both the traders and companies, appropriate grading was more important. Also, having coffee of the desired quality is an important consideration for the trader, as coffee that was harvested immature (with a high black and broken ratio or a high moisture level) would fail to meet the downstream buyers' quality requirements and would be difficult to resell.

For both collector agents and traders, it is evident that long-term relationships with farmers are of considerable importance as they need to procure a reliable supply of coffee. However, for the companies, as they only purchase directly from the farmers who have a contract with them, a long-term relationship is much less important.

In the overall supply chain, despite the impediments at the farm level, the gap did not increase when the commodity moved further downstream. This indicated that each of the downstream market intermediaries was performing some value-adding activity. Furthermore, because of the durable nature of the product itself, there was little evidence of any deterioration in the quality of the coffee as it moved down the supply chain. This is a different situation in comparison with perishable products such as fresh fruits in (Herlambang et al. 2008) and vegetables in (Cadilhon et al. 2005; Rola-Rubzen et al. 2013) studies. The problems that occur at the farm level cannot be eliminated. There is nothing the intermediary can do to improve quality along the chain. All they can do is to stop further deterioration.

In the next chapter, the relationship between farmers and supply chain intermediaries will be presented.

CHAPTER 7
ANALYSIS OF THE NATURE OF THE RELATIONSHIPS BETWEEN FARMERS AND SUPPLY CHAIN INTERMEDIARIES

7.1 Introduction

This chapter investigates the nature of the long-term relationships between actors in the Vietnamese coffee industry. This will be carried out by making comparisons between the perceptions of the different buyers and suppliers. Relationships between buyers and suppliers will be assessed using the following six factors: the level of satisfaction with the transaction, trust, commitment, communication, cooperation and power.

In Section 7.2, farmers' relationship with supply chain intermediaries is discussed. Next, market intermediaries' relationship with upstream and downstream partners is presented in Section 7.3. The chapter ends with a discussion of the findings in Section 7.4.

7.2 Farmers' relationships with supply chain intermediaries

This section is organised into four parts. Firstly, the relationship between the farmers and their most preferred and second most preferred buyers will be presented. Secondly, the relationship between the farmers and their most preferred collector agent will be described. This is then followed by an examination of the relationship between the farmers and their most preferred traders. Finally, the relationship between the farmers and their most preferred companies are explored.

7.2.1 Relationships between farmers and their most and second most preferred buyers

Table 7.1 describes the relationships between the farmers and their preferred downstream buyers. The data shows that there are differences in the nature of the relationship between the different actors. The relationship between the farmers and their preferred collector agents are viewed as close (relative or neighbour) and long-standing.

Table 7.1. Description of farmers' relationships with their preferred buyers

Criteria	F>CA	F>T	F>C
Know each other/ Acquaintance	57	25	2
Long-standing relationship/ Neighbourhood/ Relative	49	10	2
Depend on each other/ Mutual benefits	28	18	10
Very good	16	9	3
Have no relationship/ Sell to whoever pays the higher	10	3	-
Trust each other	5	8	1
Good reputation	1	1	1
Casual contact	3	1	1
Satisfactory	3	2	1
Get along well	3	1	-
Transaction relationship	1	2	-
n = 217	*139*	*59*	*19*

F>CA demonstrates the farmers' relationship with their preferred collector agents

F>T demonstrates the farmers' relationship with their preferred traders

F>C demonstrates the farmers' relationship with their preferred companies

Of the 139 farmers transacting with collector agents, 57 reported that they knew their collector agents well and 49 indicated that they had a good relationship with them. In addition, 28 revealed that they depended on their collector agents for mutual benefit. Conversely, 10 farmers admitted that they had no relationship with their collector agents, as they simply sold their coffee to whoever paid the highest price. The remaining farmers indicated that they got along well with their collector agent and were satisfied with the relationship.

Of the 59 farmers transacting with traders, 25 indicated that their relationship with the traders was similar to that of an acquaintance. Some 18 farmers reported that their relationship with the traders was mutually dependent (i.e., they work together for mutual profits). Eight farmers indicated that they trusted their preferred traders with 9 other farmers suggesting that their relationships were very good.

The relationships that the farmers had with the companies were based entirely on satisfying each other's requirements (53%). Their contracts were based on mutual agreement and the farmers who sold directly to the companies were mutually dependent.

As seen from Table 7.2, there was no long-standing relationship between the farmers and their second most preferred buyers (i.e., collector agents, traders or companies).

Twenty-six (10+16) farmers revealed that the relationships between the farmers and their second most preferred buyers were mainly casual: farmers simply sold whatever coffee they had available to whichever buyer offered the highest price.

Table 7.2. Description of farmers' relationships with their second most preferred buyers

Criteria	F>CA	F>T	F>C
Sell to whoever pays the higher price/ Have no relationship	10	16	
Purchasing and selling relationship	5	9	1
Depend on each other/ Mutual profits	1	1	
Good (no argument)	1	1	
Communication through phone calls	1		
No problem	1	1	
n = 49	*19*	*29*	*1*

F>CA demonstrates the farmers' relationship with their second preferred collector agents

F>T demonstrates the farmers' relationship with their second preferred traders

F>C demonstrates the farmers' relationship with their second preferred companies

Table 7.3 clearly shows that the most preferred buyer was able to purchase the farmers coffee all year round (2.20) at a mutually agreed price (2.76). Most preferred buyers were quick to respond to farmers' concerns (3.31) as they had a close personal relationship (3.65). However, many most preferred buyers did not always make the best offer relative to alternative buyers (3.41).

Table 7.3. Downstream relationships between the farmers and their most and second most preferred buyers

Statements	Most preferred buyers	Second most preferred buyers	Sig.
SATISFACTION			
I am satisfied with my trading partner's payment terms	2.10	2.29	0.385
Dealing with my trading partner is less risky	**2.43**	**2.76**	**0.028**
My trading partner purchases my coffee at a mutually agreed price	2.76	3.06	0.179
My trading partner responds quickly to my concerns	3.31	3.20	0.471
My trading partner purchases coffee all year round	**2.20**	**3.82**	**0.000**
I am satisfied with the transactions made with my trading partner	2.31	2.51	0.115
My trading partner often meets my expectations	**2.94**	**3.69**	**0.000**
My trading partner and I have a close personal relationship	**3.65**	**4.94**	**0.000**
My trading partner has the best offer relative to the other traders	**3.41**	**3.20**	**0.040**
TRUST			
I trust my trading partner	**2.16**	**3.41**	**0.000**

My trading partner has a good business reputation	**2.16**	**3.43**	**0.000**
My trading partner considers my best interests	**2.96**	**3.96**	**0.000**
My trading partner keeps his promises	2.65	2.82	0.073
My trading partner is always honest	**2.69**	**3.71**	**0.000**
I believe the information provided by my trading partner	3.14	3.20	0.700
My trading partner follows the agreement between us	2.86	3.00	0.398
I know my trading partner very well	3.65	3.84	0.322
COMMITMENT			
I expect my relationship with my trading partner to continue in the future	2.10	2.22	0.278
It is more cost effective for me to rely on my trading partner than to search for alternative traders	3.00	3.18	0.141
My trading partner makes an effort to help me	**3.94**	**4.41**	**0.001**
I do not intend to change my trading partner	2.92	3.16	0.165
My trading partner does not break the commitment between us	2.80	3.06	0.079
COMMUNICATION			
My trading partner keeps me well-informed on prices in the coffee market	**4.43**	**4.94**	**0.001**
My trading partner frequently suggests to me how I can improve the level of product quality	**4.31**	**5.06**	**0.000**
We often discuss better ways to pack, grade, store and process coffee	**4.55**	**5.18**	**0.000**
There is frequent contact with my trading partner	**3.00**	**4.29**	**0.000**
It is relatively easy to contact my trading partner	**2.39**	**3.04**	**0.000**
COOPERATION			
My trading partner provides financial assistance	**3.92**	**5.33**	**0.000**
I prefer to transact with a local buyer	2.65	2.84	0.890
My trading partner is willing to share in the risk	**3.90**	**4.61**	**0.000**
My trading partner and I work together for mutual benefits	**2.27**	**3.82**	**0.000**
There is good cooperation between my trading partner and myself	**3.29**	**4.90**	**0.000**
My trading partner keeps me well-informed on technical matters	5.49	5.47	0.649
POWER			
My trading partner has all the power in our relationship	**4.59**	**5.14**	**0.001**
My trading partner controls all the information in our relationship	**4.69**	**5.24**	**0.001**
My trading partner will not take advantage of a strong bargaining position (no price pressure)	**3.71**	**4.43**	**0.000**
My trading partner exerts a strong influence over me	**4.04**	**5.39**	**0.000**
I must do what my trading partner says	**4.43**	**5.02**	**0.000**
My trading partner has the right to purchase/ supply or not to purchase/ supply coffee	2.80	2.82	0.915
Total	*217*	*49*	

where 1 is "I strongly agree" and 6 is "I strongly disagree"

In terms of the level of trust in the exchange, most farmers believe the information provided by their preferred buyers (2.16) as a result of their good reputation (2.16), honesty (2.69) and their willingness to keep their promises (2.65). Although the farmers' most preferred trading partners were not always willing to help them (3.94),

they always acted in the farmers' best interest (2.96). Consequently, the farmers indicated a strong desire to continue to trade with their preferred buyers in the future (2.10).

In terms of communication, it was relatively easy for farmers to contact their most preferred buyers (2.39). However, their most preferred buyers seldom passed on any information on market price (4.43) or gave any suggestions to assist farmers in improving their product quality (4.31). Although the most preferred buyers were willing to work together for mutual benefit (2.27), they were seldom willing to share the risks (3.90) or to provide financial assistance (3.92).

In examining the power relationships between the farmers and their preferred buyers, results indicated that farmers were free to choose those buyers they would like to transact with (2.80). In their relationship, none of the parties to the exchange was able to exercise any coercive power (4.59) or to control the flow of information between the parties (4.69).

When evaluating the relationship between the farmers and their second most preferred trading partners, the farmers stated that they were very satisfied with the high price they received from their second most preferred trading partners (3.20). However, due to their poor reputation (3.43) and the fact that they did not always act in the farmers' best interests (3.96), the level of trust in the relationship between farmers and their second most preferred buyer was low (3.41). Consequently, their relationship was casual and demand-driven. Not unexpectedly, the second most preferred buyers were unwilling to share the risks (4.61) or to provide any form of financial assistance (5.33) to the farmers. Communication between the parties was very casual (4.29) and thus, little market information (4.91) or technical information was exchanged (5.47).

In terms of market power, farmers had the freedom to choose to sell their coffee to the second most preferred buyer (2.82). No parties in the exchange transaction were observed to dominate the other in the relationship (5.39).

7.2.2 Relationships between farmers and their most preferred collector agents

The results from the interviews between farmers and their preferred collector agents revealed that their relationships were generally satisfactory (2.93). Farmers preferred to transact with collector agents because they were local people (2.02) and hence, less risky

to deal with than other buyers (2.59). Also, when selling to collector agents, farmers did not have to pay the transport costs for delivery as collector agents collected the coffee from the farmers' house (3.04). Furthermore, the farmers did not have to meet the buyers' high quality requirements, as they were able to sell ungraded coffee to collector agents (Table 7.4).

Table 7.4. Examining the relationships between the farmers and collector agents

Relationships/ Items	F>CA	F<CA	Sig.
SATISFACTION			
I am satisfied with my most preferred trading partner's payment terms	2.17	1.87	0.073
Dealing with my most preferred trading partner is less risky	**2.59**	**2.28**	**0.002**
My most preferred trading partner purchases/ supplies coffee at a mutually agreed price	3.06	2.87	0.312
My trading partner often meets my expectations	**3.26**	**2.94**	**0.001**
My most preferred trading partner has the best offer relative to the other traders	**3.31**	**2.70**	**0.000**
My trading partner and I have a close personal relationship	3.22	3.41	0.095
My most preferred trading partner responds quickly to my concerns	3.43	3.19	0.129
My most preferred trading partner purchases/ supplies coffee all year round	2.35	2.33	0.886
I am satisfied with the transactions made with my most preferred trading partner	**2.93**	**2.11**	**0.000**
TRUST			
I trust my most preferred trading partner	2.26	2.11	0.376
My most preferred trading partner has a good business reputation	2.22	2.37	0.404
My most preferred trading partner considers my best interests	**3.57**	**4.00**	**0.031**
My most preferred trading partner keeps his promises	3.15	3.02	0.278
I believe the information provided by my most preferred trading partner	3.41	3.24	0.129
My most preferred trading partner follows the agreement between us	**2.83**	**2.31**	**0.001**
I know my most preferred trading partner very well	**3.24**	**2.81**	**0.002**
My trading partner is always honest	**3.70**	**3.26**	**0.001**
COMMITMENT			
I expect my relationship with my most preferred trading partner to continue in the future	2.43	2.26	0.095
It is more cost effective for me to rely on my most preferred trading partner than to search for alternative traders	**3.04**	**2.41**	**0.000**
My most preferred trading partner makes an effort to help me	3.22	3.19	0.811
I do not intend to change my most preferred trading partner	**2.33**	**1.93**	**0.001**
My most preferred trading partner does not break the commitment between us	**3.26**	**3.00**	**0.022**
COMMUNICATION			
My most preferred trading partner keeps me well-informed on prices in the coffee market	**4.20**	**3.78**	**0.026**
My most preferred trading partner frequently suggests to me how I can improve the level of product quality	**5.30**	**4.00**	**0.000**

We often discuss better ways to pack, grade, store and process coffee	**4.28**	**5.26**	**0.000**
There is frequent contact with my most preferred trading partner	2.48	2.56	0.470
It is relatively easy to contact my most preferred trading partner	2.35	2.26	0.428
COOPERATION			
My most preferred trading partner provides financial assistance	**3.74**	**3.31**	**0.007**
My most preferred trading partner keeps me well-informed about technical matters	**5.41**	**4.57**	**0.000**
I prefer to transact with a local buyer	2.02	2.17	0.073
My most preferred trading partner is willing to share in the risk	3.93	4.07	0.429
My trading partner and I work together for mutual benefits	2.33	2.46	0.290
There is good cooperation between my most preferred trading partner and myself	**3.83**	**3.07**	**0.000**
POWER			
My most preferred trading partner has all the power in our relationship	4.85	4.80	0.722
My most preferred trading partner controls all the information in our relationship	**4.67**	**5.19**	**0.003**
My most preferred trading partner will not take advantage of a strong bargaining position (no price pressure)	3.78	3.59	0.291
My most preferred trading partner exerts a strong influence over me	4.09	3.96	0.558
I must do what my most preferred trading partner says	4.59	4.35	0.079
My most preferred trading partner has the right to purchase/ supply or not to purchase/ supply coffee	2.57	2.74	0.375
Total	***139***	***54***	

where 1 is "I strongly agree" and 6 is "I strongly disagree"

F>CA demonstrates the farmers' relationship with their preferred collector agents

F<CA demonstrates the collector agents' relationship with their preferred farmers

The collector agents, however, did not always offer the best price compared to the other trading partners (3.31) and thus farmers were generally dissatisfied with the price they received from them (3.06).

Although there was an element of trust present in the relationship (2.26), farmers did not always believe in the information provided by collector agents (3.41) as they were not always honest (3.70). Furthermore, farmers often indicated that collector agents were not always working in the farmers' best interests (3.57).

In terms of communication, the farmers and collector agents had easy (2.35) and regular contact (2.48). However, farmers revealed that collector agents did not always notify them regarding any change in market prices (4.20). In addition, very little technical information was exchanged on how to improve the way to dry, process, pack, grade and transport the coffee (4.28).

In this relationship, the collector agents had little power (4.85) or influence (4.09); thus, the farmers were able to accept or to reject the collector agents' offer (2.57). Regardless, farmers still expected their relationship with their preferred collector agents to continue well into the future (2.43).

From the collector agents' perspective, most of them were highly satisfied in their exchange transactions with their most preferred farmers (2.11). Farmers choose to sell directly to the collector agents when they had only a small quantity of coffee available or when the traders paid a low price for their coffee. Despite this, the collector agents reported that they often paid the best prices to farmers (2.70). Furthermore, most collector agents were able to purchase coffee all year round (2.33) even though the volume purchased was only small. As local buyers, collector agents knew the farmers very well (2.81) and understood their problems.

Collector agents preferred to transact with those farmers who kept their promise and followed the agreement that had been made. Due to an element of trust, the collector agents expected to continue their relationships with their preferred farmers (2.26).

Communication between the collector agents and farmers was most often about prices or the amount of coffee that was available for sale. Collector agents were able to settle on an agreed price (2.87) and to respond quickly to the farmers' individual requirements (3.19).

An element of cooperation was present (2.46), but the collector agents had little power (4.80) in their relationships with their most preferred farmers.

7.2.3 Relationships between farmers and their most preferred traders

Many farmers choose to sell their coffee to traders even though they had to bear the transport cost of delivering the coffee from their farm to the traders' stores. In most cases, farmers received payment one to two weeks after the transaction had been made, which implied that a high level of trust (2.22) was present in their relationship. However, there was still some evidence of disagreements (3.56) with regard to the product price (3.11) (Table 7.5).

Table 7.5. Examining relationships between the farmers and traders

Statements	F>T	F<T	Sig.

SATISFACTION			
I am satisfied with my most preferred trading partner's payment terms	2.33	2.11	0.594
Dealing with my most preferred trading partner is less risky	2.89	3.00	0.799
My most preferred trading partner purchases/ supplies coffee at a mutually agreed price	**3.11**	**2.44**	**0.022**
My most preferred trading partner often meets my expectations	**3.56**	**3.00**	**0.013**
My most preferred trading partner has the best offer relative to the other traders	**3.67**	**3.00**	**0.050**
My trading partner and I have a close personal relationship	3.78	3.89	0.729
My most preferred trading partner responds quickly to my concerns	3.33	3.11	0.645
My most preferred trading partner purchases/ supplies coffee all year round	2.67	3.33	0.081
I am satisfied with the transactions made with my most preferred trading partner	2.44	2.22	0.347
TRUST			
I trust my most preferred trading partner	2.22	2.56	0.347
My most preferred trading partner has a good business reputation	**2.33**	**2.78**	**0.035**
My most preferred trading partner considers my best interests	3.78	3.44	0.195
My most preferred trading partner keeps his promises	2.78	3.00	0.347
I believe the information provided by my most preferred trading partner	3.44	3.89	0.104
My most preferred trading partner is always honest	3.56	3.11	0.104
My most preferred trading partner follows the agreement between us	2.89	2.78	0.729
I know my most preferred trading partner very well	3.56	4.11	0.247
COMMITMENT			
I expect my relationship with my most preferred trading partner to continue in the future	2.33	2.67	0.195
It is more cost effective for me to rely on my most preferred trading partner than to search for alternative traders	3.11	2.56	0.095
My most preferred trading partner makes an effort to help me	2.78	2.89	0.729
I do not intend to change my most preferred trading partner	**3.33**	**2.67**	**0.050**
My most preferred trading partner does not break the commitment between us	2.67	2.89	0.559
COMMUNICATION			
My most preferred trading partner keeps me well-informed on prices in the coffee market	3.56	3.89	0.282
My most preferred trading partner frequently suggests to me how I can improve the level of product quality	**4.44**	**3.67**	**0.023**
We often discuss better ways to pack, grade, store and process coffee	3.22	2.89	0.104
There is frequent contact with my most preferred trading partner	2.44	2.33	0.681
It is relatively easy to contact my most preferred trading partner	2.56	2.22	0.282
COOPERATION			
My most preferred trading partner provides financial assistance	**3.33**	**5.11**	**0.000**
My most preferred trading partner keeps me well-informed about technical matters	**5.11**	**4.56**	**0.013**
I prefer to transact with a local buyer	2.67	2.22	0.104
My most preferred trading partner is willing to share in the risk	**4.11**	**3.33**	**0.023**
My trading partner and I work together for mutual benefits	2.33	2.33	0.347
There is good cooperation between my most preferred	**2.89**	**2.22**	**0.050**

trading partner and myself			
POWER			
My most preferred trading partner has all the power in our relationship	**4.11**	**4.78**	**0.050**
My most preferred trading partner controls all the information in our relationship	**4.67**	**5.11**	**0.035**
My most preferred trading partner will not take advantage of a strong bargaining position (no price pressure)	3.89	3.33	0.179
My most preferred trading partner exerts a strong influence over me	4.33	4.89	0.051
I must do what my most preferred trading partner says	4.67	5.22	0.051
My most preferred trading partner has the right to purchase/ supply or not to purchase/ supply coffee	2.22	2.56	0.195
Total	***59***	***9***	

where 1 is "I strongly agree" and 6 is "I strongly disagree"

F>T demonstrates the farmers' relationships with their preferred traders

F<T demonstrates the traders' relationships with their preferred farmers

In terms of communication, most farmers revealed that it was relatively easy to contact their preferred traders (2.56) regardless of the distance. However, the quality of the information exchanged was poor. Traders rarely gave any advice on improving product quality (4.44) or in the provision of technical advice (5.11). Most farmers trusted (2.22) and believed the information provided by traders (3.44) even though it was recognised that traders did not always act in the farmers' best interests (3.78). Because of the traders' capacity to purchase coffee all year round (2.67), most farmers intended to maintain their relationship with preferred traders (3.33). While the farmers were free to decide who they would like to transact with (2.22), they had little power in the relationship (4.11) and little control over the information being conveyed in the relationship (4.67).

From the traders' perspective, traders viewed their relationship with their preferred farmers as being very positive and satisfactory (2.11). Not only were the traders satisfied with the price the farmers offered (2.44), but they were also pleased with the level of commitment that followed (2.89). Moreover, the traders indicated that it was more cost effective to continue their relationship with existing farmers rather than to seek alternative suppliers (2.56). Traders preferred to enter into exchange transactions with farmers they already knew, rather than to switch to new and untested relationships (2.67).

Traders indicated that they trusted (2.56) and believed in the information provided by farmers (3.89). According to the traders, most farmers were considered to be honest suppliers (3.11) and often keep their promises (3.00).

Most traders sought to establish an on-going relationship with their preferred farmers for the future (2.67). While there was a desire to cooperate and work together for mutual benefit (2.33), traders were not willing to share the risks (i.e., effects of adverse weather conditions) (4.11) and were rarely able to offer any financial assistance (5.11).

7.2.4 Relationships between farmers and their most preferred companies

In the Vietnamese coffee supply chain, few smallholder farmers had any direct contact with companies due to their inability to meet the companies' high requirements. However, in exploring the farmers' relationship with their preferred company, it was apparent that those farmers who could comply were very satisfied in their transaction with the companies (2.00). According to the farmers, companies could purchase their coffee all year round (2.67), at a mutually agreed price (2.33). Furthermore, companies provided the best offer relative to other buyers (2.33). Overall, most companies were able to meet the farmers' expectations (Table 7.6).

Table 7.6. Examining the relationships between the farmers and their most preferred companies

Relationships/Items	F>C	F<C	Sig.
SATISFACTION			
I am satisfied with my most preferred trading partner's payment terms	2.33	2.67	0.423
Dealing with my most preferred trading partner is less risky	2.67	3.00	0.742
My most preferred trading partner purchases/ supplies coffee at a mutually agreed price	2.33	3.00	0.184
My trading partner and I have a close personal relationship	3.33	3.67	0.667
My most preferred trading partner responds quickly to my concerns	3.67	4.00	0.742
My most preferred trading partner purchases/ supplies coffee all year round	2.67	3.00	0.742
I am satisfied with the transactions made with my most preferred trading partner	2.00	2.33	0.423
My most preferred trading partner has the best offer relative to the other traders	2.33	2.00	0.423
TRUST			
I trust my most preferred trading partner	1.67	2.00	0.423
My most preferred trading partner has a good business reputation	2.00	2.67	0.423
My most preferred trading partner considers my best interests	3.67	3.33	0.423
My most preferred trading partner keeps their promises	2.67	3.00	0.742
I believe the information provided by my most preferred trading partner	2.33	3.33	0.225
My most preferred trading partner is always honest	3.33	3.00	0.432

My most preferred trading partner follows the agreement between us	2.67	3.00	0.423
I know my most preferred trading partner very well	3.67	2.33	0.184
COMMITMENT			
I expect my relationship with my most preferred trading partner to continue in the future	2.33	2.00	0.423
It is more cost effective for me to rely on my most preferred trading partner than to search for alternative traders	3.33	2.00	0.184
My most preferred trading partner makes an effort to help me	3.33	2.67	0.478
I do not intend to change my most preferred trading partner	2.00	2.33	0.423
My most preferred trading partner does not break the commitment between us	2.00	2.33	0.423
COMMUNICATION			
My most preferred trading partner keeps me well-informed on prices in the coffee market	3.67	5.33	0.184
My most preferred trading partner frequently suggests to me how I can improve the level of product quality	2.67	5.33	0.057
It is relatively easy to contact my most preferred trading partner	3. 33	3. 67	0.667
There is frequent contact with my most preferred trading partner	3.67	4.00	0.423
We often discuss better ways to pack, grade, store and process coffee	4.00	3.67	0.742
COOPERATION			
My most preferred trading partner provides financial assistance	**2.67**	**5.33**	**0.015**
I prefer to transact with a local buyer	3.67	3.33	0.667
My most preferred trading partner is willing to share in the risk	2.67	3.33	0.478
My trading partner and I work together for mutual benefits	2.33	2.67	0.667
There is good cooperation between my most preferred trading partner and myself	2.67	3.00	0.423
My most preferred trading partner keeps me well-informed about technical matters	3.33	4.67	0.742
POWER			
My most preferred trading partner has all the power in our relationship	5.00	4.67	0.063
My most preferred trading partner controls all the information in our relationship	5.00	5.33	0.074
My most preferred trading partner will not take advantage of a strong bargaining position (no price pressure)	3.33	2.67	0.423
My most preferred trading partner exerts a strong influence over me	4.00	5.00	0.074
I must do what my most preferred trading partner says	4.67	5.00	0.130
My most preferred trading partner has the right to purchase/ supply or not to purchase/ supply coffee	2.33	2.67	0.057
Total	***19***	***3***	

where 1 is “I strongly agree” and 6 is “I strongly disagree”

F>C demonstrates the farmers’ relationship with their preferred companies

F<C demonstrates the companies’ relationship with their preferred farmers

In examining the relationship between farmers and their preferred company, it came as no surprise to find a high level of trust was present in their exchange (1.67). Companies were recognised as honest parties (3.33) who always kept their promises (2.67). However, farmers admitted that they did not always understand the

company's problems (3.67), but they believed that transacting with company buyers was less risky in comparison with other trading partners (2.67).

In general, companies had a good business reputation (2.00) and always followed the agreements established (2.67). Consequently, those farmers trading with companies wished to continue their relationship into the future (2.33).

From the companies' perspective, they were satisfied in their transactions with preferred farmers (2.33), as they provided the best offer relative to other suppliers (2.00). Companies appreciated the farmers' problems (2.33), were willing to share the risks (3.33), and to offer some financial assistance to the farmers (5.33). Furthermore, the companies were willing to provide suggestions to the farmers to improve the quality of their coffee (5.33). There was good cooperation between the parties (3.00) and both were engaged in working together for mutual benefits (2.67). Although there was a need for the farmers to follow up on the agreements made (2.33), there was no evidence of any coercive exploitation (5.00).

7.3 Market intermediaries' relationships with upstream and downstream partners

In examining the nature of the collector agents' relationship with their preferred suppliers, it was apparent that most collector agents (33%) viewed their relationship with their most preferred suppliers as long-standing (Table 7.7).

Table 7.7. Description of collector agents' relationships with their preferred suppliers

Responses	F<CA
Long-standing relationship	18
Good relationship/ Get along well	12
Trust each other	11
Purchasing and selling relationship	9
Neighbourhood	7
Giving credit/ Financial assistance	4
Meet buyer's and supplier's requirements	3
Good reputation	2
No problem at all	2
Satisfied with our relationship	1
Frequent contact	1
Coordinate	1
n = 54	*54*

F<CA demonstrates the farmers' relationship with their preferred collector agents

Some 11 collector agents reported that their relationships with preferred suppliers were very good as they trusted each other. Some 7 respondents dealt with their

neighbours and 9 indicated that their relationships with preferred suppliers were simply based on purchasing and selling. Others described their relationship as interdependent, which included the desire to work together to meet downstream buyers' requirements.

Not unexpectedly, the relationships that the collector agents had with their downstream buyers were also described as long-standing: 53% for traders and 43% for companies. More than 21% of collector agents revealed that their relationship with downstream buyers was good and that they trusted each other. Only 2 collector agents reported that their relationships were only a purchasing and selling agreement. The majority of the collector agents expressed their satisfaction with the exchange and their desire to work together to meet the requirements of the buyer and supplier respectively.

In a similar manner, 28% of the collector agents indicated that they trusted and had a good relationship with companies (Table 7.8).

Table 7.8. Description of collector agents' relationship with their preferred buyers

Responses	CA>T	CA>C
Long-standing relationship	25	3
Good relationship	11	2
Trust each other	10	2
Good relationship/ Get along well	5	-
Satisfied with our relationship	4	1
Cooperation	3	1
Purchasing and selling agreement	2	-
Meet buyer's and supplier's requirements	1	1
No problem at all	1	-
Work for buyer/ on behalf of buyer	1	-
n = 54	*47*	*7*

CA>T demonstrates the collector agents' relationship with their preferred traders

CA>C demonstrates the collector agents' relationship with their preferred companies

In examining the relationships traders had with their preferred upstream suppliers (including farmers and collector agents), most traders revealed that they had good relationships with their preferred farmers and collector agents. There was also some evidence of a close and long-term personal relationship. However, 30% of traders viewed their relationship with suppliers as only a purchasing and selling relationship and thus no personal relationships were involved. The remaining respondents

admitted that their on-going relationship with suppliers was good with a minimum of conflict. Moreover, all parties were willing to cooperate and to work together to meet buyers' and suppliers' requirements (Table 7.9).

Table 7.9. Description of traders' relationship with their preferred suppliers

Responses	F<T	CA<T
Long-standing relationship	4	10
Trust each other	3	8
Close relationship/ long-term relationship	2	5
Cooperation	2	5
Working in the same industry	-	3
Purchasing and selling agreement/ Transaction relationship	1	7
Meet buyer's and supplier's requirements	1	-
Good, no conflict	1	-
Ongoing well	1	1
Satisfied with our relationship	1	1
N = 32	*9*	23

F<T demonstrates the traders' relationship with their upstream farmers

CA<T demonstrates the traders' relationship with their upstream collector agents

Traders were also asked to express the nature of their relationship with other traders and companies as their downstream buyers. Of the 27 traders who had a relationship with companies, 13 revealed that their relationships were very good, while a further 8 reported that their relationships were long-standing. Some 6 traders indicated that their relationships with downstream buyers were built on trust. However, the majority of traders (3 out of 5) who had a relationship with other traders admitted that their relationships were entirely business, and were simply based on their purchasing and selling agreements (Table 7.10).

Table 7.10. Description of traders' relationship with their preferred buyers

Responses	T> other T	T>C
Good relationship	1	13
Satisfied with our relationship	1	5
Long-standing relationship/ Close	-	8
Meet buyer's and supplier's requirements	1	2
Trust each other	-	6
Mutual benefits	1	3
Purchasing and selling agreement	3	2
Have no relationship	1	1
N = 32	*5*	*27*

T> other T demonstrates the traders' relationship with their downstream traders

T<C demonstrates the traders' relationship with their downstream companies

The relationships that the companies had with different upstream suppliers were very diverse. Most companies (3 out of 5) had established enduring long-standing relationships with traders who were their main suppliers, in order to secure a regular and reliable supply of coffee of the desired quality and price. In addition, their relationships with preferred upstream farmers were good (1 out of 3) and satisfactory (1 out of 3) as they could purchase coffee at the lowest price direct from farmers. On the other hand, companies had limited transactions with collector agents as they were usually dissatisfied with the quality supplied by collector agents (1 out of 4). Nevertheless, most companies transacted with collector agents to ensure they had access to a sufficient quantity of coffee to fill their downstream orders (Table 7.11).

Table 7.11. Description of companies' relationship with their preferred suppliers

Responses	F<C	CA<C	T<C	C<C
Purchasing and selling agreement/ Transaction	-	1	-	1
Long-standing relationship	1	-	3	1
Have no relationship	-	1		-
Good relationship	1	1	1	-
Frequent contact	-	-	-	1
Based on a contract	1	-	-	1
Satisfied with our relationship	1	-	1	-
Get along well	-	-	1	1
Not satisfied due to bad quality	-	1	-	-
N = 14	*3*	*4*	*5*	*2*

F<C demonstrates the companies' relationship with their upstream farmers

CA<C demonstrates the companies' relationship with their upstream collector agents

T<C demonstrates the companies' relationship with their upstream traders

C<C demonstrates the companies' relationship with their upstream companies

7.3.1 Collector agents' relationships with their downstream buyers

As market intermediaries in the coffee supply chain, collector agents have relationships with both upstream suppliers and downstream buyers. However, as the collector agents' relationships with upstream suppliers (farmers) has been described in the earlier section, this section will only discuss the collector agents' relationships with downstream buyers.

In exploring the nature of the collector agents' relationship with downstream traders, collector agents indicated that there was a high level of trust (1.86) and satisfaction in

their relationship (1.86) (Table 7.12). Most collector agents expressed their desire to maintain their relationship with traders into the future (2.14).

Table 7.12. Examining the relationship between the collector agents and their most preferred buyer

Relationships/ Categories	CA>T	CA>C	Sig.
SATISFACTION			
I am satisfied with my most preferred buyer's payment terms	**2.14**	**3.29**	**0.000**
Dealing with my most preferred buyer is less risky	2.00	2.29	0.172
My most preferred buyer purchases coffee at a mutually agreed price	**1.86**	**2.57**	**0.047**
My most preferred buyer responds quickly to my concerns	**2.00**	**2.71**	**0.008**
My most preferred buyer purchases my coffee all year round	2.00	2.14	0.356
I am satisfied with the transactions made with my most preferred buyer	**1.86**	**2.57**	**0.047**
My trading partner and I have a close personal relationship	2.86	3.14	0.172
My most preferred buyer has the best offer relative to the other buyers	1.86	2.00	0.356
TRUST			
I trust my most preferred buyer	1.86	2.29	0.078
My most preferred buyer has a good business reputation	2.29	2.00	0.172
My most preferred buyer considers my best interests	**2.86**	**3.43**	**0.030**
My most preferred buyer keeps his promises	2.29	2.57	0.356
I believe the information provided by my most preferred buyer	2.29	2.43	0.604
My most preferred buyer follows the agreement between us	2.00	2.14	0.356
I know my most preferred buyer very well	2.29	2.43	0.604
COMMITMENT			
I expect my relationship with my most preferred buyer to continue in the future	2.14	1.71	0.407
It is more cost effective for me to rely on my most preferred buyer than to search for alternative buyers	3.00	2.57	0.078
My most preferred buyer makes an effort to help me	2.71	3.00	0.172
I do not intend to change my most preferred buyer	2.14	2.29	0.604
My most preferred buyer does not break the commitment between us	2.00	2.14	0.356
COMMUNICATION			
My most preferred buyer keeps me well-informed on prices in the coffee market	2.86	3.29	0.589
My most preferred buyer frequently suggests to me how I can improve the level of product quality	3.14	3.43	0.356
We often discuss better ways to pack, grade, store and process coffee	**3.00**	**3.57**	**0.030**
There is frequent contact with my most preferred buyer	2.00	2.14	0.604
It is relatively easy to contact my most preferred buyer	2.86	3.14	0.356
COOPERATION			
My most preferred buyer provides financial assistance	**3.57**	**4.29**	**0.047**
My most preferred buyer keeps me well-informed about technical matters	3.86	4.29	0.078
I prefer to transact with a local buyer	2.14	1.71	0.407
My most preferred buyer is willing to share in the risk	**3.57**	**4.43**	**0.017**
My most preferred buyer and I work together for mutual benefits	2.71	3.14	0.589
There is good cooperation between my most preferred buyer and myself	3.14	3.57	0.589

POWER			
My most preferred buyer has all the power in our relationship	5.00	5.14	0.356
My most preferred buyer controls all the information in our relationship	5.14	5.29	0.356
My most preferred buyer will not take advantage of a strong bargaining position (no price pressure)	2.71	2.86	0.689
My most preferred buyer exerts a strong influence over me	4.86	4.57	0.172
I must do what my most preferred buyer says	4.71	4.43	0.457
My most preferred buyer has the right to buy or not to buy my coffee	2.00	1.86	0.356
Total	**47**	**7**	

where 1 is "I strongly agree" and 6 is "I strongly disagree"

CA>T demonstrates the collector agents' relationship with their preferred traders

CA>C demonstrates the collector agents' relationship with their preferred companies

Communication between collector agents and traders was frequent (2.00) and thus, it was easy to be kept well-informed about the market price (2.86). However, there was little discussion on how to improve the quality of the coffee (3.14). Furthermore, there was little evidence of any cooperation (3.14) or desire to work together for mutual benefit (2.71). It was also apparent that most traders were not willing to share the risk (3.57) and seldom provided any financial assistance (3.57) or technical advice (3.86).

The relationship that collector agents had with companies was less strong. There was some evidence of dissatisfaction in the exchange with companies (2.57) as they seldom acted in the collector agents' best interests (3.43). Although it was relatively easy to contact a company (3.14), companies rarely advised the collector agents on how they could improve the quality of the coffee they had available (3.43).

Collector agents also indicated that they were seldom satisfied with the price they received from companies (2.57). Furthermore, the companies were often slow in making payment (3.29) and seldom met the collector agents' expectations. Moreover, it was evident that neither the traders (5.00) nor the companies (5.14) were able to exercise any coercive power in their relationship with collector agents.

7.3.2 Traders' relationships with upstream suppliers and downstream buyers

In terms of the relationship between the traders and their upstream suppliers, the results of the study reveal that traders were generally satisfied in their relationship with both farmers (2.22) and collector agents (2.11). Traders sought to maintain relationships with a large number of collector agents and farmers in order to ensure a

regular and reliable supply of coffee as suppliers were sometimes unable to follow through on their commitments (2.33) due to unexpected events/incidents such as adverse weather conditions or pest and disease problems. Traders generally preferred to transact with collector agents rather than farmers, as collector agents were better able to meet the traders' expectations in providing coffee all year round (2.89) and to respond more quickly to their concerns (2.22) (Table 7.13).

Table 7.13. Examining the relationships between the traders and their upstream suppliers

Relationships/ Categories	F<T	CA<T	Sig.
SATISFACTION			
I am satisfied with my most preferred supplier's payment terms	2.11	1.89	0.447
Dealing with my most preferred supplier is less risky	3.00	2.56	0.104
My most preferred supplier provides coffee at a mutually agreed price	2.44	1.89	0.051
My most preferred supplier often meets my expectations	**3.00**	**2.56**	**0.035**
My most preferred supplier has the best offer relative to the other buyers	3.00	2.44	0.013
My most preferred supplier responds quickly to my concerns	**3.11**	**2.22**	**0.021**
My trading partner and I have a close personal relationship	3.89	3.22	0.081
My most preferred supplier provides the product all year round	3.33	2.89	0.169
I am satisfied with the transactions made with my most preferred supplier	2.22	2.11	0.594
TRUST			
I trust my most preferred supplier	2.56	2.00	0.095
My most preferred supplier has a good business reputation	**2.78**	**1.89**	**0.035**
My most preferred supplier considers my best interests	3.44	3.22	0.447
My most preferred supplier keeps his promises	3.00	2.78	0.447
My most preferred supplier is always honest	3.11	3.00	0.347
I believe the information provided by my most preferred supplier	3.89	3.22	0.081
My most preferred supplier follows the agreement between us	3.78	2.56	0.447
I know my most preferred supplier very well	4.11	3.56	0.051
COMMITMENT			
I expect my relationship with my most preferred supplier to continue in the future	2.67	2.22	0.104
It is more cost effective for me to rely on my most preferred supplier than to search for an alternative supplier	2.56	2.22	0.195
My most preferred supplier makes an effort to help me	2.89	2.67	0.447
I do not intend to change my most preferred supplier	2.67	2.44	0.347
My most preferred supplier does not break the commitment between us	2.89	2.33	0.139
COMMUNICATION			
My most preferred supplier keeps me well-informed on prices in the coffee market	**3.89**	**2.67**	**0.002**
My most preferred supplier frequently suggests to me how I can improve the level of product quality	3.67	3.33	0.081
We often discuss better ways to pack, grade, store and process coffee	2.89	2.67	0.347
There is frequent contact with my most preferred supplier	2.33	1.78	0.950
It is relatively easy to contact my most preferred supplier	2.22	1.78	0.104

COOPERATION			
My most preferred supplier provides financial assistance	5.11	5.00	0.374
My most preferred supplier keeps me well-informed about technical matters	4.56	4.11	0.104
I prefer to transact with a local supplier	2.22	1.89	0.195
My most preferred supplier is willing to share in the risk	3.33	3.11	0.347
My most preferred supplier and I work together for mutual benefits	2.33	1.78	0.051
There is good cooperation between my most preferred supplier and myself	2.22	1.89	0.195
POWER			
My most preferred supplier has all the power in our relationship	4.78	5.00	0.347
My most preferred supplier controls all the information in our relationship	5.11	5.00	0.447
My most preferred supplier will not take advantage of a strong bargaining position (no price pressure)	3.33	3.67	0.195
My most preferred supplier exerts a strong influence over me	4.89	4.78	0.681
I must do what my most preferred supplier says	5.22	4.56	0.111
My most preferred supplier has the right to supply or not to supply coffee	2.56	2.11	0.104
Total	**9**	**23**	

where 1 is "I strongly agree" and 6 is "I strongly disagree"; and

F<T demonstrates the traders' relationship with their preferred upstream farmers

CA<T demonstrates the traders' relationship with their preferred upstream collector agents

There was frequent contact between the traders and their upstream suppliers to review the quantity, quality and price in the exchange (2.33 and 1.78). However, there was limited cooperation between the traders and their upstream suppliers (2.22 and 1.89). Suppliers who sold to the traders were encouraged to harvest or to purchase mature coffee.

At the trader level, suppliers incurred the majority of the price risk, for the coffee was sold through consignment. In addition, prices were determined on the day, according to quality, supply and demand. From the traders' perspective, both farmers and collector agents had very little market power (4.78 and 5.00) and thus, little control over the information being exchanged in the relationship (5.11 and 5.00).

In examining the traders' relationships with their downstream buyers, traders revealed that their relationship with downstream buyers was generally impersonal (4.00). Communication consisted only of discussions around the quantity and quality of the coffee the buyers needed, the time of delivery, and the payment terms. In their transactions with other traders, traders were not satisfied with the price (4.80) or the

delays in payment (3.60). As a result, traders chose to transact with other traders only when required (Table 7.14).

Table 7.14. Examining relationships between traders and their downstream buyers

Relationships/ Categories	T>T	T>C	Sig.
SATISFACTION			
I am satisfied with my most preferred buyer's payment terms	**3.60**	**1.40**	**0.029**
Dealing with my most preferred buyer is less risky	**4.00**	**2.80**	**0.033**
My most preferred buyer purchases my coffee at a mutually agreed price	**4.60**	**2.80**	**0.001**
My most preferred buyer has the best offer relative to the other buyers	**3.00**	**2.20**	**0.016**
My most preferred buyer often meets my expectations	3.80	3.00	0.099
My most preferred buyer responds quickly to my concerns	3.80	3.20	0.070
My trading partner and I have a close personal relationship	4.00	3.20	0.178
My most preferred buyer purchases my coffee all year round	**4.20**	**2.00**	**0.004**
I am satisfied with the transactions made with my most preferred buyer	**4.40**	**2.20**	**0.004**
TRUST			
I trust my most preferred buyer	**3.80**	**1.80**	**0.022**
My most preferred buyer has a good business reputation	**2.80**	**1.60**	**0.033**
My most preferred buyer considers my best interests	3.60	3.20	0.374
My most preferred buyer is always honest	**3.80**	**3.00**	**0.016**
My most preferred buyer keeps his promises	**4.80**	**2.20**	**0.019**
I believe the information provided by my most preferred buyer	**4.60**	**2.80**	**0.037**
My most preferred buyer follows the agreement between us	3.80	2.60	0.178
I know my most preferred buyer very well	**4.40**	**3.40**	**0.034**
COMMITMENT			
I expect my relationship with my most preferred buyer to continue in the future	3.40	2.20	0.109
It is more cost effective for me to rely on my most preferred buyer than to search for alternative buyers	2.80	2.60	0.621
My most preferred buyer makes an effort to help me	**3.60**	**2.80**	**0.016**
I do not intend to change my most preferred buyer	3.00	2.40	0.070
My most preferred buyer does not break the commitment between us	2.60	2.40	0.778
COMMUNICATION			
My most preferred buyer keeps me well-informed on prices in the coffee market	**5.20**	**2.40**	**0.000**
My most preferred buyer frequently suggests to me how I can improve the level of product quality	**4.60**	**2.80**	**0.037**
We often discuss better ways to pack, grade, store and process coffee	5.00	4.80	0.621
There is frequent contact with my most preferred buyer	3.40	2.60	0.178
It is relatively easy to contact my most preferred buyer	2.80	2.60	0.621
COOPERATION			
My most preferred buyer provides financial assistance	4.00	3.20	0.178
My most preferred buyer keeps me well-informed about technical matters	4.80	4.20	0.070
I prefer to transact with a local buyer	3.80	3.20	0.305
My most preferred buyer is willing to share in the risk	**4.80**	**3.00**	**0.037**
My most preferred buyer and I work together for mutual benefits	3.60	3.20	0.374
There is good cooperation between my most preferred buyer and myself	**4.40**	**2.60**	**0.037**

POWER			
My most preferred buyer has all the power in our relationship	5.20	4.80	0.374
My most preferred buyer controls all the information in our relationship	5.00	4.80	0.374
My most preferred buyer will not take advantage of a strong bargaining position (no price pressure)	4.60	4.00	0.305
My most preferred buyer exerts a strong influence over me	5.00	4.60	0.178
I must do what my most preferred buyer says	5.20	4.80	0.178
My most preferred buyer has the right to buy or not to buy my coffee	2.20	2.80	0.070
Total	**5**	**27**	

where 1 is "I strongly agree" and 6 is "I strongly disagree"; and

T<T demonstrates the traders' relationship with their preferred traders

T<C demonstrates the traders' relationship with their preferred companies

On the contrary, there was a high element of trust evident in the traders exchange relationship with downstream companies (1.80). There was regular and frequent communication between the traders and companies (2.60) to discuss how the quality could be improved (2.80), as well as regular updates on market prices (2.40). While traders indicated that both parties in the exchange worked together for mutual benefit (3.20), there was little willingness to share the risks (3.00).

Although no parties in the relationship were able to exercise any coercive market power (4.80) or to control the information in the exchange (4.80), it was evident that downstream buyers would often seize the opportunity to take advantage of their strong bargaining position (4.00).

7.3.3 A comparison of the companies' relationships with their upstream suppliers

With regards to the companies' satisfaction in their exchange relationships with upstream suppliers, most indicated a high level of satisfaction (1.60) and trust (1.80) in their trading relationship with preferred suppliers. Not unexpectedly, traders received the highest rating for both trust (1.80) and satisfaction (1.60) as compared to both collector agents (4.00 and 2.75) and farmers (2.00 and 2.33). This was due to traders being recognised as more honest (2.00 compare to 3.25 CA or 3.00 F) and having a better reputation (1.40 compare to 3.25 CA or 2.67 F). More importantly, traders could offer the companies a consistent supply of coffee all year round (1.80) at a more competitive price than other suppliers (1.80) (Table 7.15).

Table 7.15. Examining relationships between companies and their upstream suppliers

Relationships/Categories	F<C	CA<C	T<C	C<C
SATISFACTION				
I am satisfied with my most preferred supplier's payment terms	**2.67^{ab}**	**2.50^{ab}**	**1.60^{a}**	**3.50^{b}**
Dealing with my most preferred supplier is less risky	3.00^{a}	3.50^{a}	2.60^{a}	3.00^{a}
My most preferred supplier provides coffee at a mutually agreed price	3.00^{a}	3.25^{a}	2.80^{a}	3.50^{a}
My most preferred supplier has the best offer relative to the other buyers	**2.00^{a}**	**3.00^{b}**	**1.80^{a}**	**4.50^{c}**
My most preferred supplier responds quickly to my concerns	**3.67^{b}**	**2.25^{a}**	**1.80^{a}**	**4.00^{b}**
My trading partner and I have a close personal relationship	3.67 ^{a}	3.50 ^{a}	2.80 ^{a}	4.00 ^{a}
My most preferred supplier provides the product all year round	**3.00^{ab}**	**2.75^{a}**	**1.80^{a}**	**4.50^{b}**
My most preferred supplier often meets my expectations	2.67^{a}	2.75^{a}	1.60^{a}	3.00^{a}
I am satisfied with the transactions with my most preferred supplier	**2.33^{a}**	**2.75^{ab}**	**1.60^{a}**	**4.00^{b}**
TRUST				
I trust my most preferred supplier	**2.00^{a}**	**4.00^{c}**	**1.80^{a}**	**3.00^{b}**
My most preferred supplier has a good business reputation	**2.67^{ab}**	**3.25^{b}**	**1.40^{a}**	**2.50^{ab}**
My most preferred supplier considers my best interests	3.33^{a}	4.25^{a}	3.00^{a}	3.50^{a}
My most preferred supplier keeps his promises	3.00^{a}	3.50^{a}	2.20^{a}	3.00^{a}
My most preferred supplier is always honest	**3.00^{b}**	**3.25^{b}**	**2.00^{a}**	**3.00^{b}**
I believe the information provided by my most preferred supplier	3.33^{a}	3.67^{a}	3.00^{a}	4.00^{a}
My most preferred supplier follows the agreement between us	**3.00^{ab}**	**4.00^{b}**	**2.80^{a}**	**3.00^{ab}**
I know my most preferred supplier very well	2.33^{a}	3.50^{a}	2.00^{a}	3.00^{a}
COMMITMENT				
I expect my relationship with my most preferred supplier to continue in the future	2.00^{a}	2.50^{a}	1.60^{a}	2.50^{a}
It is more cost effective for me to rely on my most preferred supplier than to search for an alternative supplier	2.00^{a}	2.25^{a}	1.60^{a}	2.00^{a}
My most preferred supplier makes an effort to help me	2.67^{a}	3.00^{a}	2.20^{a}	3.00^{a}
I do not intend to change my most preferred supplier	2.33^{a}	2.50^{a}	2.00^{a}	3.00^{a}
My most preferred supplier does not break the commitment between us	**2.33^{ab}**	**3.25^{b}**	**1.80^{a}**	**2.50^{ab}**
COMMUNICATION				
My most preferred supplier keeps me well-informed on prices in the coffee market	5.33a	5.00a	4.20a	4.50a
My most preferred supplier frequently suggests to me how I can improve the level of product quality	5.33a	5.00a	4.40a	5.00a
We often discuss better ways to pack, grade, store and process coffee	3.67a	4.00a	3.40a	4.50a
There is frequent contact with my most preferred supplier	3.33a	3.00a	2.80a	3.75a
It is relatively easy to contact my most preferred supplier	3.67a	2.75a	2.40a	2.00a
COOPERATION				
My most preferred supplier provides financial assistance	5.33a	5.25a	4.40a	5.00a
My most preferred supplier keeps me well-informed about technical matters	4.67a	5.00a	4.80a	4.50a
I prefer to transact with a local supplier	3.33a	3.75a	2.80a	4.00a

My most preferred supplier is willing to share in the risk	4.67[a]	4.75[a]	4.40[a]	5.00[a]
My most preferred supplier and I work together for mutual benefits	2.67[a]	3.00[a]	2.80[a]	3.50[a]
There is good cooperation between my most preferred supplier and myself	3.00[a]	3.75[a]	2.80[a]	3.00[a]
POWER				
My most preferred supplier has all the power in our relationship	4.67a	4.50a	4.00a	4.50a
My most preferred supplier controls all the information in our relationship	5.33[a]	5.25[a]	5.20[a]	5.50[a]
My most preferred supplier will not take advantage of a strong bargaining position (no price pressure)	2.67[a]	3.00[a]	2.60[a]	3.50[a]
My most preferred supplier exerts a strong influence over me	5.00[a]	5.25[a]	4.80[a]	5.50[a]
I must do what my most preferred supplier says	5.00[a]	5.00[a]	4.60[a]	5.00[a]
My most preferred supplier has the right to supply or not to supply coffee	2.67[a]	2.50[a]	2.00[a]	2.00[a]
Total	***3***	***4***	***5***	***2***

where 1 is "I strongly agree" and 6 is "I strongly disagree"; and

F<C demonstrates the companies' relationship with their preferred farmers

CA<C demonstrates the companies' relationship with their preferred collector agents

T<C demonstrates the companies' relationship with their preferred traders

C<C demonstrates the companies' relationship with their preferred companies

Results followed with the different letters in the same row show significant difference detected by Turkey HSD[a,b] test at significant level of 0.05

Although it is very easy for the companies to stay in contact with their suppliers, they rarely discussed ways to improve the packing, grading or transporting of the coffee (3.67 F, 4.00 CA, 3.40 T, 4.50 C). However, the companies and their suppliers did make an effort to work together for mutual benefit (2.67 F, 3.00 CA, 2.80 T, 3.50 C). Furthermore, there was no evidence of the exercise of any coercive market power in the relationship between the companies and their suppliers (4.67 F, 4.50 CA, 4.40 T, 4.50 C) as all parties sought to maintain good relationships in the long run (2.00 F, 2.50 CA, 1.60 T, 2.50 C).

Despite the problems, some companies indicated that they were very satisfied with the quality of the coffee that they received from contract farmers (2.33). However, as many farmers lack both capital and technology, they need support from the companies. To fulfil the farmers' needs, most companies offered credit and provided advice on improved farming techniques. Moreover, the companies rewarded those farmers who were able to produce good quality coffee.

It was clear that long-term relationships between companies and collector agents seldom existed. Companies reported that they were generally dissatisfied in their transactions with collector agents (2.75) as there was a low level of trust (4.00), communication (3.00) and cooperation (3.75) present in the relationship. Although trading directly with collector agents provided another opportunity to secure coffee at a cheaper price in comparison to the traders, collector agents were considered to be the most risky suppliers (3.50), as not only did they often break their promises (3.50), they seldom kept to agreements previously made (3.25). Furthermore, collector agents expected immediate payment upon making the sale.

It was evident that the relationship between companies and traders was long-term. There was a good level of cooperation between companies and traders (2.80), and a high level of trust (1.80) and satisfaction (1.60).

However, in examining the relationships between companies and other companies, there was a very low level of satisfaction (4.00) and trust (3.00). As a result, companies chose to transact with other companies only when they needed specific amounts of coffee to complete their outstanding orders.

7.4 Chapter discussion

Most farmers sell their coffee to collector agents due to the trust that has been established over many repeat transactions. There is an element of mutual dependence where collector agents provide a cash deposit to farmers for the purchase of inputs. As a result, farmers are effectively locked into a financial relationship with the collector agents, whereby they are expected to sell their coffee to collector agents as a means of repaying the loan and the interest which accrues.

Farmers preferred to sell coffee to collector agents as they purchased all year round. Both parties had trust and confidence in one another. Farmers who had not engaged in a financial relationship with their preferred collector agents were able to exercise their right to sell or not to sell, which for the collector agent led to some uncertainty in the supply.

The biggest disadvantage in selling coffee to collector agents was the lack of any quality standard and commensurate with that, the payment of incentives for

providing superior quality coffee. According to Rola-Rubzen et al. (2010), the lack of any product standard left farmers with minimal control over the price they received for their product. This was exacerbated by the lack of any grading system, thus depriving farmers of the opportunity to take advantage of any price differentiation.

In transacting with the traders, farmers were seldom dependent. Farmers could readily shift to an alternative relationship whenever they had a chance to get a better price. The relationship between farmers and traders was positive and satisfactory. Farmers sold their coffee to traders on consignment as a flexible way of optimizing the trade due to the uncertainty of price in the market. Farmers did not get paid until the traders had resold all the coffee that they purchased. In this respect, farmers displayed considerable trust in their preferred traders. As a result of many prior transactions, both parties intended to maintain their relationship with each other largely because their expectations had been fulfilled and there were no better exchange partners.

Most relationships between farmers and companies were based on satisfaction with the price received and a reputation for fair and honest transactions. When choosing to sell coffee to a company, farmers expected to receive technical and financial assistance from the company. However, the inability of most smallholder farmers to meet the company' requirements resulted in their exclusion from the chain. Those farmers who sold coffee to companies were practising good cultivation techniques and had made an appropriate investment in inputs for their farms.

Those farmers who transacted with a company realized how important the quality and quantity requirements were to the company in order for the company to meet downstream customers' needs. There was some evidence of cooperation between the farmers and the companies. It is also evident that those farmers who transacted with the companies were more dependent on the companies as they worked together to achieve mutual benefit. Kwon and Suh (2005) indicated that where both parties' financial interests were served, both parties would endeavour to maintain their relationship. While the company was willing to make investments to assist the farmer, the farmer was committed to supply good quality coffee to the company.

Both farmers and the company willingly entered into a contractual agreement which stipulated the responsibilities and benefits each exchange partner could expect. This created a long-term relationship between the two parties. Farmers had to follow the company's prescribed methods of cultivation, including the application of chemicals and fertilisers, and to harvest the coffee at the desired maturity. In return, the company would take all the coffee that farmers produced and pay an agreed price.

Farmers were the main supply option for collector agents. Collector agents regularly visited their farmers, but technical and market information was rarely exchanged. According to collector agents, farmers knew the prevailing market price without seeking their advice. Collector agents indicated that farmers were rarely able to exercise any coercive market power in their relationship. However, when a farmer and a collector agent had an mutual attraction, a long-lasting relationship can be readily established providing equitable benefits for both parties (Hald, Cordon and Vollmann 2009). An analysis of the relationship between collector agents and farmers indicated that most of them were repeat transactions.

Collector agents choose to transact with preferred farmers who were best able to fulfil their needs. Collector agents preferred to transact with farmers who were financially strong and with whom they had established a long-term relationship. Most collector agents paid half of the anticipated price at the time they picked up the coffee and paid the balance to farmers after receiving money from their downstream buyers.

The principal function of the collector agents was to collect coffee from many small individual farmers and to then arrange for the transport of the coffee to the traders. Collector agents were not only better able to satisfy the traders' needs, but they also offered a more competitive price. Like farmers, collector agents sold coffee on consignment to traders. As a result, there was a high element of trust and commitment apparent in the exchange between collector agents and traders, and in this case, both parties worked together for mutual benefit. Studies showed that even in the absence of a formal contract, through the establishment of a long-term relationship based on trust, the parties were able to transact with confidence (Herlambang, Batt and McGregor 2006; Tanaya 2010) and collectively handle the price uncertainty that prevailed in the international coffee market.

Collector agents indicated a strong desire to maintain their existing relationship with traders to provide a reliable supply of good quality coffee and thus, to some extent, the traders were more dependent on the collector agents. However, despite the almost daily contact between collector agents and traders, cooperation between them was limited and they rarely exchanged information about how to improve product quality.

Collector agents indicated only a moderate level of trust in their relationship with companies, as payment delays often led to conflict between the two parties. Furthermore, there was little evidence of either party being willing to share information, especially on prices. As both parties could readily identify alternative exchange partners, neither party was able to exercise any control over their exchange partner.

Although most traders dealt with farmers, they often experienced problems with both the quality and the reliably of supply. Farmers were only able to transact with traders when they had a sufficient quantity of coffee available, and when they were not locked into any financial relationship with collector agents. Traders therefore had to transact with numerous farmers to ensure they had a reliable supply.

Most relationships between traders and farmers were repeat transactions whenever farmers had coffee to sell. Traders generally indicated a moderate level of satisfaction and trust in their transactions with preferred farmers. However, farmers seldom asked how they could improve the level of product quality. Traders purchased coffee from farmers on consignment, and thus traders indicated that there was little need for them to cooperate. However, some cooperation would not only lead to greater trust, but the more effective transfer of market information could have positive benefits for both parties in terms of better managing quality along the chain (Gibbon 2003).

From the traders' perspective, although the level of communication between traders and collector agents was frequently through telephone, the quality of the market information exchanged was still poor. Although traders handled the largest volume of coffee, traders seldom had all the power in the relationship, nor were they able to control all the information. Nor was there any evidence of the use of coercive power, even although some collector agents reported that the traders generally controlled the price in the market.

Traders had built a long-term relationship with companies. Traders were generally able to satisfy the companies' requirements on both quantity and quality. However, traders were often dissatisfied in their relationship as companies were often slow in making payment and seldom met the traders' expectations.

Nevertheless, the relationship between the companies and traders was based primarily on satisfactory prior exchanges and the reputation that had been established from many prior transactions. For some companies, they chose to purchase coffee from whoever had the best quality. For these companies, their relationship was more transactional.

Observing the chain as a whole, the relationships between participants were largely informal and managed by integrating personal traits into their business activities: e.g., trust in lending money for personal purposes, allowing deferred payment, concern with a partner's problem, being trustworthy by repaying debt, or not taking advantage of an exchange partner even if an opportunity arises. The combined personal and business traits approach is evident in the way participants selected their trading partners. Apart from price, personal characteristics are what participants used as the basis for selecting their preferred trading partners.

As relationships in the coffee supply chain were informal, coupled with the lack of capital in the supply chain, differences in the degree of dependency and thus the power structure were evident between actors. This dependency allowed chain members to be flexible with payment and their delivery schedule. In other words, chain members were willing to accommodate the needs and weaknesses of their trading partners because they did not want to lose their relationships.

On the other hand, the informality of the relationships also allowed supply chain members to be flexible in a sense that each actor can readily change trading partners. Even although this was an option, it was not the preferred strategy, as it prevented the chain members from securing a regular and reliable supply of coffee.

Furthermore, in the absence of a functional legal system which enforces fair trading practices, the informal business relationships present in the chain curtail the high rate of opportunism which would otherwise prevail in transactions (Chatterjee et al. 1999). As a result, developing reliable relationships is crucial to being able to thrive

in an uncertain business environment. This is in line with Collins and Burt (2006) and Le (2015) who contend that any business relationship reduces costs, increases flexibility, reduces uncertainty and/or improves profitability by increasing sales and gross margins.

Profitability for a firm is strengthened by the performance of suppliers: viz., the supplier's ability to provide a high quality product, at a competitive price. These factors impact directly on an exchange partners' satisfaction with the transaction, which leads to relationship commitment. Johnson, Sivadas, and Garbarino (2008) and Payan and Svensson (2007) argue that trust and commitment are antecedents of satisfaction, but Hennig-Thurau, Gwinner, and Gremler (2002); Moliner et al. (2007) and Batt (2007) state that satisfaction is an antecedent of trust and commitment. In fact, satisfaction, trust and commitment are self-reinforcing: the more satisfied potential exchange partners are with the transaction, the more trust is built and the greater the commitment to continue the relationship.

However, more effective communication among chain members is needed as sharing information increases the opportunity for firms to better understand their exchange partners (Spekman, Spear and Kamauff 2002). Sharing information is also an essential condition to encourage fair and equitable relationships, especially when those involved lack trust and have a tendency to act opportunistically.

Relationships among members of the Vietnamese coffee supply chain were considered to be informal as transactions were primarily based on verbal promises. However, while actors could readily switch to another trading partner if they paid a higher price, there was no guarantee of getting paid and thus a good business reputation became very important. The role of personal traits such as kindness, honesty, loyalty and trustworthiness were very important since coffee supply chains operate in an uncertain business environment. Even so, the relationships between supply chain participants were observed to move from being personal to increasingly more business-like as the coffee moved through the chain.

The next chapter will synthesise the major findings of the study, pointing out the limitations and giving suggestions for future research.

CHAPTER 8
SYNTHESIS AND CONCLUSIONS

8.1 Introduction

In this chapter, the main findings and an outline for future work are summarised. First, a recapitulation of the thesis chapters is provided in Section 8.2. The next section clarifies the major research findings. Section 8.4 discusses the contributions of this thesis. The limitations of the study are presented in Section 8.5. Recommendations are presented in Section 8.6. Finally, in Section 8.7, several research directions that can be built upon are listed.

8.2 Summary of the thesis

Chapter 1

In Chapter 1, based on secondary data the research objectives were defined. This study has been conducted in order to explore the performance of coffee supply chains to facilitate the on-going development of the coffee industry in Vietnam. The chapter also outlined the importance of the study in reflecting the issues faced by members of coffee supply chains in the Central Highlands of Vietnam.

As the second biggest coffee export country, there are still many problems that exist in Vietnam including: the uncertainty in quantity and quality, and the absence of any legal system enforcing fair trading practices. This is likely to lead to some conflict among chain members and thus the need to measure supply chain performance.

Chapter 2

From the research problems and questions, a review of the extant literature was developed in this chapter. Four major areas of investigation were identified in the literature: supply chain management, managing customers' needs, marketing margins and managing relationships in supply chains. Effective supply chain management is best achieved where there is an appropriate measure of supply chain performance.

Chapter 2 provided an overview of the development of supply chain performance around the world, and drew attention to the types of problems and challenges that must be addressed in measuring the performance of supply chains. It is thought that this can be best achieved by simultaneously integrating the results of an analysis of price margins, customers' needs and relationships among members of the supply chain.

Chapter 3

In this chapter, the appropriate methodological framework for the study was discussed. The study was undertaken as an exploratory study with a mix of qualitative and quantitative approaches. Chapter 3 described in detail the research design for both phases of data collection.

Chapter 4

Chapter 4 was used to present the results of the qualitative interviews with coffee farmers and market intermediaries. The findings provided rich information about the various actors and the activities that they undertook in the supply chain. Constraints in improving product quality, the criteria participants' used when choosing trading partners and broad perceptions about their relationships with exchange partners were identified. The information presented in this chapter laid the foundation for data collection in the subsequent quantitative phase.

Chapter 5, 6, and 7

The findings of the quantitative data from the survey and interviews with coffee farmers and market intermediaries were presented in Chapters 5, 6 and 7. Chapter 5 explored the marketing margins, Chapter 6 the gap analysis and Chapter 7 explored the actors' relationships with upstream and downstream trading partners. Data gathered via interviews provided insights into how supply chain members chose their trading partners, managed customers' needs within the supply chain and managed their relationships with exchange partners.

8.3 Major findings

There are nine major findings in this study, as follows:

1. The uncertainty faced by participants is caused by product variation, the characteristic of the product, supply and demand dynamics in the international market, and relationship uncertainties which stem from the absence of any legal system enforcing fair trade practice.

2. Supply chain members' perception and expectations change from individual to individual, they tend to be varied and inconsistent across the supply chain. In the absence of a legal system enforcing fair trade practices, the supply chain activities are governed according to a range of unspoken expectations such as when engaging in a financial relationship, farmers have to pay high interest and sell coffee with low price.

3. Informal and risky in nature, these relationships require supply chain members to trust and to be honest in their business activities, to be committed to their exchange partners, to respond to their partners' needs, and to be diplomatic in managing conflict so as not to let the other party get offended. Managing these relationships has a direct influence on supply chain performance which, in the context of study, is viewed as the ability to provide a reliable and stable supply to customers.

4. While it is true that in every relationship there is one party that is considered more powerful/dominant, power distribution is influenced by the actors' position there is a recognition that buyers have a legitimate right to control/command. The inter-dependency is the main factor that connects the actors in the absence of any formal buyer to seller relationship.

5. The results highlight the similarities and differences in the activities and the costs added onto market intermediaries as the product moves further downstream. From the marketing margin analysis, it is apparent that each

exchange party places different weights on activities done and resources forfeited. The price margin increased as the product moved further downstream. This implies that an increased margin is necessary to cover the greater risks associated with a highly volatile market and the greater costs associated with relevant activities.

6. There are significant differences between expectations and what is received in each trading dyad in terms of price, quality and payment. Each actor places different weights on a wide range of factors which they use to choose and evaluate the ability of their trading partners to meet their needs. While farmers look for buyers that offer high prices and guaranteed payment, downstream trading partners were more concerned about securing a reliable supply of good quality coffee. The gap analysis revealed the difference between the customer's expectation and the supplier's capabilities to meet those expectations.

7. There is a large element of trust and commitment present in the exchange between supply chain members that has been established over many repeat transactions. The relationships at the farm level were very personal but as the transactions moved down the supply chain these relationships became more businesslike.

8. Overall, the relationships are more flexible, they seldom depend on other party, except when they have financial support from others. Most relationships between sellers and buyers are based on satisfaction with the price received, trust and the reputation of buyers which withholds or restrains opportunism.

9. Acting individually, smallholder farmers are unlikely to be rewarded for producing high quality coffee, as the volumes exchanged are too small. Collector agents have no way of determining superior quality coffee or of being rewarded for purchasing superior quality coffee because they face a similar problem when reselling to a trader or company. As the coffee chain is fragmented and involves a large number of small players, in order to obtain large volumes, the coffee of various farmers is mixed together by collector agents. While this practice facilitates the entry of multiple producers into the chain, the coffee loses its

identity in the first stage in the supply chain. According to Rola-Rubzen et al. (2013) smallholder farmers may choose to establish collaborative marketing groups to have a stronger voice. Most buyers prefer to transact with larger farmers because of their capacity to produce better quality crops due to more efficient and business-oriented farming methods and larger volumes of produce which reduce the cost of collection, improve traceability, and their capacity to bear risk in the event of crop failure. Small farmers, therefore, may potentially benefit from the establishment of collaborative marketing groups.

8.4 Limitations

As with all research, the current study has a number of limitations which must be recognised. The study was conducted within the confines of a coffee supply chain, and situations faced by members of coffee supply chains may be different from those other supply chains experience.

The findings reflect the behaviour and the marketing decisions made by various members of the coffee industry in the Central Highlands of Vietnam. Supply chains are affected by various factors such as the size of the business, customers' needs, geographic location and the prevailing relationships. Any attempt to replicate the study in a different context may yield different results. However, an attempt to conduct a similar study on a supply chain of similar products or with similar industry characteristics may reveal similar findings.

The results from this study should be considered as exploratory. Despite recognising the value of the research in terms of the study discipline, further benefits will accrue from further studies.

This research was conducted in the context of the coffee supply chain in the Central Highlands of Vietnam. As there is a lack of information and literature on this subject, it presented additional challenges for this study. The findings, as presented, are entirely dependent on the responses and the viewpoints given by the participants (interviewees). While the respondents gave freely their time, the information provided may be both biased and inaccurate, for in the absence of any written records, the responses as given relied entirely on memory. While farmers can be

expected to provide reasonably accurate information on selling prices, market intermediaries may be more reluctant to reveal the prices at which they buy and/or sell products because of the sensitivity and confidentiality of business information. It is possible that they may have overstated the buying price and understated the selling price in order to reduce their perceived profit margins. As a result, this could lead to significant errors in reporting. However, the researcher carefully explained that any information provided on prices will be kept confidential and not be passed on to others, so it is assumed that respondents will provide as truthful information as possible.

8.5 Contribution of the study

8.5.1 Theoretical contribution

This research made several contributions. Based on the nature of the relations between the approaches used, the study highlights three processes such as comparison, enrichment and integration. Comparison evaluates the similarities and differences between analysis methods to determine if the combination of methods leads to an improved problem resolution. Enrichment refers to the improvement of one method by encompassing elements of another without producing any new overall content. Integration involves fusing elements of existing approaches to develop something new (Le 2015; Bennett 1985).

This study contributes to the theory of supply chain performance by integrating many aspects of supply chain management and the constructs affecting long-term marketing relationships. Price margins were analyzed to understand how value was distributed in the supply chain and which if any segments of the chain were inefficient. Gaps between the supply chain members' needs and their trading partners' ability to meet these needs were analyzed to understand the exchange process in terms of technical, functional and service quality variables (quality and quantity of coffee, harvest activities and transport), economic variables (price and terms of payment, financial assistance) and relational variables (trust and reputation). Finally, marketing relationships (satisfaction, trust, commitment, communication, cooperation and power) were analyzed to understand how they facilitated the exchange process between trading partners.

All supply chain activities must aim to meet the ultimate customer's needs (Kotler et al. 2014). Consistent with the existing literature, this study has shown that the customer actions impacts on all other supply chain members, it is the supplier who needs to adjust according to the customer's terms and the supplier needs to be more sensitive of the customer's needs. Complying with the terms of supplier enables a customer to secure future supply subsequently securing future market. As such, this study recalls the existing literature by impressing the importance of supplier relationship management in the present of informal binding forces.

Essentially, relationship marketing management is about managing the customer-supplier relationships in a way that allows the marketing strategy to be successful. This study contributes to the existing literature by how relational factors such as satisfaction, trust, commitment, communication, cooperation and power expressly enable supply chain members to create a market for them in an uncertain business environment.

8.5.2 Practical contribution

By calculating the marketing margin for all participants along the supply chain it was possible to understand which actors were the most able to achieve their desired margins. As a result, it was possible to develop a conceptual model about the trading system which was focused on providing fair returns to all supply chain participants in the future.

The gap analysis revealed the difference between the customer's expectation and the supplier's capabilities to meet those expectations. This analysis used the quality of the products as its focus for improving production on farm and more appropriate mechanisms for post-harvest handling of the product.

The analysis of buyer-seller relationships was used to understand how supply chain members connected without formal binding forces which enforce fair trading.

Underpinning the research was a belief that the Vietnamese coffee industry does not, as yet, support and encourage the activities that are necessary to deliver high quality and cost effective products. In response to the research questions, the survey results

have confirmed that while the net margins each actor can extract from the exchange are not big, the efficiency of the chain is not a problem. However, there is a gap between what farmers want and what they receive from their downstream market intermediaries, and also a gap between what market intermediaries want and what they receive from their upstream suppliers. These results also suggest there are strong possibilities for future development of the coffee industry in Vietnam.

The development and implementation of a reward scheme for farmers to improve coffee quality depends upon how well market intermediaries can overcome various obstacles and difficulties that have been identified through this research. A number of the recommendations focus specifically on the key obstacles and suggest ways in which the Vietnamese coffee industry can work with related organisations and government agencies to provide an effective environment for improvement.

While the recommendations that are included in this chapter have been specifically based on the industry data and circumstances, it is not claimed that Vietnam is alone in this regard. Many developing countries face similar challenges in accessing the technologies and infrastructure that are necessary for quality improvement. Therefore in addressing this issue with regard to Vietnam, and in attempting to create solutions that can resolve key problems, this research is also devising responses that may well have application in other developing countries.

The foremost audience for this research is the Vietnamese coffee industry and stakeholders, e.g., particularly potential leaders of DARD, and decision and policy makers at institutional and governmental levels. While the research is heavily contextualised by the circumstances in Vietnam, it is believed that the outcomes and recommendations will also have relevance to other developing countries and agribusiness supply chains in south-east Asia.

Persons wishing to become involved in, or those currently involved in the Vietnamese coffee industry can use the findings from this study in marketing planning. Through this study, they can be informed of the industry conditions, individual behaviours and expectations of members at each segment of the supply chain. Similarly, limitations associated with supply chain members, particularly

capital limitations, can be considered in regard to possible opportunities to develop cooperative relationships. Moreover, any person, or firm, operating in a similar industry context may use the findings from this study to better understand what relational skills they need to develop in order to improve their buyer-seller relationships.

For policy makers and agricultural authorities, this study has demonstrated that what is deficient in the industry is a lack of product and procedural standards; these need to be developed and supported in order to improve the coffee supply chains operating. The study reveals that lack of capital or financial support is a major issue among members of supply chains particularly farmers. Policy makers can support farmers by providing micro-financing services with soft terms and conditions for members of the chains. Along with that, the local agricultural authorities can initiate the formation of collection centres in the villages and administer the activities. The centre will promote fair trading and fair prices in the upstream. Furthermore, such developments can potentially provide an opportunity for coffee supply chains to work more closely, more co-operatively and with improved financial outcomes.

The study shows that the activities in the coffee supply chains are done in a manner without proper procedural standards, adequate equipment and technique. Such condition leaves no room to reduce uncertainty unless members of the chains are willing to change. The current production procedures appear to be inadequate, in that they lead to a low quality of products, resulting in a low price for producers. The production process of coffee already entails high risk as farmers are unable to control weather patterns or cope with intermittent attacks by coffee diseases or pests. Given the high risks associated with production and the increasing pressures for lower prices, there is a general concern in the industry that there is price fluctuation, and not enough incentive for farmers to plan coffee. Farmers in the current study have expressed this concern and pointed out examples of farmers who have decided to reduce the size of their coffee farm and/or switch to other crops. Generally, not only can this negatively influence the coffee planning programme, but, this also leads to unsustainable agriculture development.

In the past, the industry has been focussed primarily on production practices (Rios and Shively 2016; Ha et al. 2010). However, it is important to ensure that it is addressing the main areas that affect the performance of the supply chains while customer needs change. An examination of the entire coffee supply chain is important for decision-makers both internal (e.g., producers, market intermediaries) and external (e.g., policy-makers, investors) to identify impediments and thus, to determine where resources can be best allocated. Evaluating supply chain performance will help implement projects and programs which will increase the level of exports, generate new employment opportunities and improve living standards for coffee farmers. While many papers have been written about the subject (Tracey, Lim and Vonderembse 2005; Flynn, Huo and Zhao 2010; Jean, Sinkovics and Kim 2010; Rungtusanatham et al. 2003; Lambert 2008; Arzu Akyuz and Erman Erkan 2010; Wiengarten et al. 2010), a localized understanding of the concept will enrich existing knowledge.

The focus of the recommendations presented in this chapter is on creating an environment and the conditions that will pave the way for effective supply chain management. It is not claimed that this task will be easy or straightforward. Future industry can only be improved if traders are able to deal with the various obstacles and disincentives that have been identified in this research in a way that eventually produces a more positive practical outcome from the opportunities offered by cooperation. Any attempts to change or to improve the current approach will require considerable, sustained and focused effort. However, the outcomes provided by carefully developed cooperation can and will produce not only measurable gains but also positively influence a much healthier and stronger culture of cooperation among Vietnamese coffee supply chain members.

The findings could also be used by practitioners to inspire innovation in cultivation techniques, processes, programs and marketing. The findings can help farmers, institutions, food distributors, policy makers, and other members of the agribusiness supply chain to make decisions in improving managing supply chain. The findings of this research also have further reaching implications, such as on the connectivity of members along the supply chain, the impact of strong agribusiness on export value and the potential value of marketing initiatives.

8.6 Recommendations

It is essential to increase the value added to the coffee product, and this goes beyond making investments into processing. All stakeholders in the Vietnamese coffee supply chain, such as government, farmers, market intermediaries and buyers should cooperate closely to encourage further innovations in coffee cultivation and sales. However, there has been no investment in quality control, irrigation systems, fertilizing systems, or coffee processing; those are some of the main factors that the Vietnamese coffee industry has to overcome in order to maintain their leadership in the world market.

Success in supply chain management depends largely on effective contributions by various members of the supply chain. No single member can claim all the credit for success. Effective supply chain management requires the participation of various 'equally authorised' partners. The diversity of stakeholders, make the processes of improvement slow and complicated, especially in the lack of cooperation.

8.7 Possible future research extensions

As noted at several points in this thesis, Vietnam has not produced a large body of research or commentary on its coffee supply chain, and a culture of improvement requires a willingness to rigorously and objectively interrogate current practice. It is hoped that this research project will not only go some way to addressing that paucity of research, but also form the basis for future related research and publishing. Indeed based on the strengths, weakness and outcomes of this current project, ongoing research is necessary to understand the constantly changing impact of supply chain member behaviour and decision-making, communication technologies and their business practices. Future investigation centred on the effectiveness of supply chain management is essential to provide an evidence base for further investment by government and/or institutions.

Useful research may include further surveys of all Vietnamese stakeholders to assess their future engagement in improving supply chain performance, with a focus on the level of satisfaction of chain members and any measureable improvements to their content and services. Future research should also investigate the impact of

performance both on the effectiveness of individual members and on the supply chain as a whole. This may include testing the effectiveness of specific models of intensive reward.

It is hoped that the findings and the recommendations reported in the preceding chapters can provide solutions for future development as an important contribution to the development of Vietnamese coffee supply chain.

It is almost certain that this is the first intensive research study that provides a clear picture of the behaviour among industry members in Vietnam. This thesis itself is a contribution to the copious body of literature on supply chain performance which hitherto has been conspicuous in its lack of coverage of Vietnamese practices. It is hoped that this research, its findings and its recommendations will contribute to increasing the awareness of farmers, market intermediaries, institutions, government agencies and decision makers regarding the potentially hugely beneficial impact of managing supply chain effectively. The findings provide a full understanding about practical issues regarding managing supply chain that Vietnamese coffee industry are concerned about and dealing with. The recommendations offered in this chapter provide some guidance on the important steps that need to be taken as Vietnamese coffee industry take into account.

Driven by an urgent need to improve the quality of coffee in cultivation techniques, harvesting, drying, processing which take place in the supply chain, participants need to actively seek and find ways of developing and implementing high-quality coffee and services. In doing so, they will be enhancing their contribution to the supply chain performance of the coffee industry in particular, and to the Vietnamese economy in general.

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APPENDIX

ID: ……..……

COFFEE GROWERS QUESTIONNAIRE

Name of participant: …….Contact: ……..……

Section 1.About your farm and your coffee production practices

1. Location of your farm: .....

2. a. Total area of farm: .....sao

   b. Area cropped in Robusta coffee: .....sao

3. Are you producing(tick appropriate box below)

   ☐ mono coffee ☐ coffee and fruit ☐Robusta and Arabica coffee

4. Number of years you have been growing coffee? .....year

5.What was the total quantity of product you produced last year? .....kg

6. a. THIS YEAR, do you expect your production to (tick appropriate box below)

   ☐ increase ☐ decrease ☐ stay the same

   b. Why do you expect your production to change?

   .....
   .....
   .....

Section 2.To whom do you sell your coffee?

7. a. To how many buyers did you sell the coffee you have grown? .....buyers

b. FOR THE LAST 12 MONTHS, how many kg coffee that you produced was sold to

Buyers	**Robusta**	
	Cherry	Green bean
Collector agents		
Traders		
Companies		
Total		

c. Has this amount changed over the last 2 years?

☐ Yes ☐ No

d. If Yes, why this amount has changed?

.....
.....
.....

e. Why do you choose to sell your coffee to these types of buyers?

Collector agents: .....

.....

Traders: .....

.....

Company: .....

.....

8. a. What type of buyer is your most preferred buyer?

☐ Collector agents ☐ Trader ☐ Company

b. Can you please name your most preferred buyer ? .....

c. Why do you prefer to trade with this buyer?

.....
.....
.....

d. In what form do you sell coffee to this buyer? .....

e. How many years have you been trading with your most preferred buyer? …….....

9. a. What is your harvest method?

☐ Selective picking ☐ Strip picking

b. How many people involved in harvest?.....

c. How much you pay for one person per day for harvest?.....

d. How many kilograms harvested per day?.....

10. a. Did you use any postharvest treatment prior to sale to your most preferred buyer?

☐ Yes ☐ No (**Go to Question 11**)

b. If, Yes what chemicals did you use?

.....
.....

c. How much does the average cost for chemical?
.....

11. a. Did you dry coffee prior to sale to your most preferred buyer?

☐ Yes ☐ No (**Go to Question 12**)

b. If, Yes how long do you dry coffee?
.....
.....

c. How much does the average cost for drying?.....
d. What percentage of losses occurred during drying period?.....
e. What were the main reasons for this loss?
.....
.....

12. a. Did you process coffee prior to sale to your most preferred buyer?

☐ Yes ☐ No (**Go to Question 13**)

b. If, Yes How much does the average cost for processing?
.....
.....

c. What percentage of losses occurred after processing?.....
d. What were the main reasons for this loss?
…….....
.....

13. a. Did you grade coffee prior to sale to your most preferred buyer?

☐ Yes ☐ No (**Go to Question 14**)

b. What percentage of coffee fell into each of the following grades?

Robusta	Percentage (%)
First	
Second	
Third	
Unqualified	

c. What did you do with these unqualifies coffee?

.....

.....

.....

14. a. Did you pack coffee when selling to your most preferred buyer?

☐ Yes ☐ No (**Go to Question 15**)

b. If, Yes what materials did you use for packing?

.....

.....

c. How much does the materials cost for packing?

.....

d. How many people involved in packing?.....
e. How much you pay for one person per day for packing?.....
f. How many kilograms packed per day in total?.....

15. a. Did you store coffee prior to sale to your most preferred buyer?

☐ Yes ☐ No (**Go to Question 16**)

b. If, Yes how long do you store coffee?

.....

.....

c. How much does the average cost for store?.....
d. What percentage of losses occurred during store period?.....
e. What were the main reasons for this loss?

.....

.....

16. a. Were you responsible for the cost of delivering coffee to your most preferred buyer?

☐ Yes ☐ No (**Go to Question 17**)

b. If, Yes how much the average cost of delivering?.....

c. What percentage of losses occurred during transport?.....

d. What were the main reasons for this loss?

.....
.....

17. a. Were you responsible for the loading and unloading cost?

☐ Yes ☐ No (**Go to Question 18**)

b. If, Yes how much the average cost of loading/unloading?.....
.....

18. a. FOR THE LAST COFFEE SEASON, what were the lowest, highest and average prices you received PER KG by grade/ungraded from your most preferred buyer?

Robusta	First	Second	Third	Ungrade
Highest				
Lowest				
Average				

b. Has the price increased/decreased or stayed the same over last 12 months?

☐ Increased ☐ Decreased ☐ Stayed the same

c. Why has the price changed?

.....
.....

19. a. Did you have a contract with your most preferred buyer?

☐ Yes ☐ No **(Go to Question 20)**

b. How many years has this contract left to run?

…….....

c. What were the terms and conditions between you and your most preferred buyer under this contract?

.....
.....

.....

d. What advantages/benefits do you believe you have obtained by operating under this contract?

.....
.....

e. What problems/difficulties have you experienced operating under this contract?

.....
.....

f. What actions/events have strengthened the relationship?

.....
.....

g. What actions/events have weakened the relationship?

.....
.....

21. In choosing between alternative buyers, what criteria do you use?

.....
.....
.....

22. In choosing between ALTERNATIVE BUYERS, how important were EACH of the following factors. Please circle the appropriate response.

(Note: 1 is "not at all important", 2 is "not important", 3 is "less important", 4 is "partly important", 5 is "important" and 6 is "very important")

a	able to purchase my harvested coffee all year round	1	2	3	4	5	6
b	provides me with a fair price	1	2	3	4	5	6
c	pays on time	1	2	3	4	5	6
d	rewards me for good quality coffee	1	2	3	4	5	6

e	has a good business reputation	1	2	3	4	5	6
f	provides technical information/advice	1	2	3	4	5	6
g	provides market information	1	2	3	4	5	6
h	offers credit	1	2	3	4	5	6
i	can transport coffee from my farm	1	2	3	4	5	6
j	is willing to meet my immediate needs	1	2	3	4	5	6
k	is geographical close to me	1	2	3	4	5	6
l	have a long-standing relationship	1	2	3	4	5	6
m	communicate regularly	1	2	3	4	5	6
n	my buyer is trustworthy	1	2	3	4	5	6

23. To what extent is your most preferred buyer able to fulfil your's needs? On a scale from 1 to 6, please indicate how well you think your most preferred buyer can met EACH of these criteria.

(Note: 1 is "not at all well", 2 is "not well", 3 is "partly not well", 4 is "partly well", 5 is "well" and 6 is"very well")

A	able to purchase my harvested coffee all year round	1	2	3	4	5	6
B	provides me with a fair price	1	2	3	4	5	6
C	pays on time	1	2	3	4	5	6
D	rewards me for good quality coffee	1	2	3	4	5	6
E	has a good business reputation	1	2	3	4	5	6
F	provides technical information/advice	1	2	3	4	5	6
G	provides market information	1	2	3	4	5	6
H	offers credit	1	2	3	4	5	6
I	can transport coffee from my farm	1	2	3	4	5	6
J	is willing to meet my immediate needs	1	2	3	4	5	6
K	is geographical close to me	1	2	3	4	5	6
L	have a long-standing relationship	1	2	3	4	5	6

M	communicate regularly	1	2	3	4	5	6
N	my buyer is trustworthy	1	2	3	4	5	6

24. What were the most important things that prevent your most preferred buyer from meeting your needs?

.....
.....
.....

25. What criteria do you think are most important to your most preferred buyer in their decision to purchase your coffee?

.....
.....
.....

26. On a scale of 1 to 6, please indicate how important you believe EACH of the following criteria were to your most preferred buyer in choosing between ALTERNATIVE GROWERS.

(Note: 1 is "not at all important", 2 is "not important", 3 is "partly not important", 4 is "partly important", 5 is "important" and 6 is "very important")

A	provide large quantities of coffee	1	2	3	4	5	6
B	have coffee in the desired quality	1	2	3	4	5	6
C	have coffee free from physical defects	1	2	3	4	5	6
D	have coffee free from foreign matter	1	2	3	4	5	6
E	have coffee free of pets and deseases	1	2	3	4	5	6
F	have coffee that is well graded	1	2	3	4	5	6
G	have coffee that is well dried	1	2	3	4	5	6
H	have coffee that is good looking	1	2	3	4	5	6
I	have coffee that is large bean	1	2	3	4	5	6
J	have coffee that store well	1	2	3	4	5	6
K	have coffee with the right maturity	1	2	3	4	5	6
L	ability to deliver coffee when required	1	2	3	4	5	6
M	reliable supplier	1	2	3	4	5	6

N	provides coffee at a competitively price	1	2	3	4	5	6
O	able to give credit (deferred payment)	1	2	3	4	5	6
P	willing to meet their immediate needs	1	2	3	4	5	6
Q	have a long-standing relationship	1	2	3	4	5	6
R	have a good business reputation	1	2	3	4	5	6
S	have a contract	1	2	3	4	5	6

27. To what extent do you believe you were able to fulfil your most preferred buyer's needs for EACH of following criteria? On a scale from 1 to 6, please indicate how well you think you can met EACH of these criteria.

(Note: 1 is "not at all well", 2 is "not well", 3 is "partly not well", 4 is "partly well", 5 is "well" and 6 is "verywell")

A	provide large quantities of coffee	1	2	3	4	5	6
B	have coffee in the desired quality	1	2	3	4	5	6
C	have coffee free from physical defects	1	2	3	4	5	6
D	have coffee free from foreign matter	1	2	3	4	5	6
E	have coffee free of pets and deseases	1	2	3	4	5	6
F	have coffee that is well graded	1	2	3	4	5	6
G	have coffee that is well dried	1	2	3	4	5	6
H	have coffee that is good looking	1	2	3	4	5	6
I	have coffee that is large bean	1	2	3	4	5	6
J	have coffee that store well	1	2	3	4	5	6
K	have coffee with the right maturity	1	2	3	4	5	6
L	ability to deliver coffee when required	1	2	3	4	5	6
M	reliable supplier	1	2	3	4	5	6
N	provides coffee at a competitively price	1	2	3	4	5	6
O	able to give credit (deferred payment)	1	2	3	4	5	6
P	willing to meet their immediate needs	1	2	3	4	5	6
Q	have a long-standing relationship	1	2	3	4	5	6

R	have a good business reputation	1	2	3	4	5	6
S	have a contract	1	2	3	4	5	6

28. a. What were the most important things that prevent or stop you from meeting your most preferred buyer's needs?

.....
.....
.....

b. What things can you do to improve your ability to fulfil your most preferred buyer's needs?

.....
.....
.....

29. How would you describe the nature of your relationship with your most preferred buyer?

.....
.....
.....
.....

30. Please respond to EACH of the following statements concerning the nature of the relationship between you and your most preferred buyer. Please circle your answer.

(Note: 1 is "not at all agree", 2 is "not agree", 3 is "partly not agree", 4 is "partly agree", 5 is "agree" and 6 is " totally agree")

SATISFACTION							
1	I am satisfied with my most preferred buyer payment term	1	2	3	4	5	6
2	Dealing with my most preferred buyer is less risky than others	1	2	3	4	5	6
3	My most preferred buyer purchases my coffee at a mutually agreed price	1	2	3	4	5	6
4	My most preferred buyer responds quickly to my concerns	1	2	3	4	5	6
5	My most preferred buyer purchases my coffee all year round	1	2	3	4	5	6
6	My most preferred buyer often meets my expectation	1	2	3	4	5	6
7	My most preferred buyer and I have a close personal relationship	1	2	3	4	5	6

8	My most preferred buyer has the best offer relative to the other traders	1	2	3	4	5	6
9	I am satisfied with my transactions with my most preferred buyer	1	2	3	4	5	6
TRUST							
1	I trust my most preferred buyer	1	2	3	4	5	6
2	My most preferred buyer has a good business reputation	1	2	3	4	5	6
3	My most preferred buyer considers my best interests	1	2	3	4	5	6
4	My most preferred buyer keeps their promises	1	2	3	4	5	6
5	My most preferred buyer is always honest	1	2	3	4	5	6
6	I belive the information provided by my most preferred buyer	1	2	3	4	5	6
7	My most preferred buyer follow the agreement between us	1	2	3	4	5	6
8	I know my most preferred buyer very well	1	2	3	4	5	6
COMMITMENT							
1	I expect my relationship with my most preferred buyer to continue	1	2	3	4	5	6
2	It is more cost effective for me to rely on my most preferred buyer than search for alternative buyers	1	2	3	4	5	6
3	My most preferred buyer makes an effort to help me	1	2	3	4	5	6
4	I do not intend to change my most preferred buyer	1	2	3	4	5	6
5	My most preferred buyer do not break the commitment between us	1	2	3	4	5	6
COMMUNICATION							
1	My most preferred buyer keeps me well informed on price in the coffee market	1	2	3	4	5	6
2	My most preferredbuyer frequently suggests me how I can improve the level of product quality	1	2	3	4	5	6
3	We often discuss better ways to pack, grade, store, and process coffee	1	2	3	4	5	6
4	I have frequent contacts with my most preferred buyer	1	2	3	4	5	6
5	It is relatively easy to contact my most preferred buyer	1	2	3	4	5	6

COOPERATION							
1	My most preferred buyer provides financial assistance	1	2	3	4	5	6
2	My most preferred buyer keeps me well informed on technical matters	1	2	3	4	5	6
3	I prefer to transact with local buyer	1	2	3	4	5	6
4	My most preferred buyer is willing to share the risk	1	2	3	4	5	6
5	My most preferred buyer and I work together for mutual benefits	1	2	3	4	5	6
6	There is a good cooperation between my most preferred buyer and myself	1	2	3	4	5	6
POWER							
1	My most preferred buyer has all the power in our relationship	1	2	3	4	5	6
2	My most preferred buyer controls all the information in our relationship	1	2	3	4	5	6
3	My most preferred buyer will not take advantage of a strong bargaining position (no price pressure)	1	2	3	4	5	6
4	My most preferred buyer exerts a strong influence over me	1	2	3	4	5	6
5	I must do what my most preferred buyer says	1	2	3	4	5	6
6	My most preferred buyer has the right to buy or not to buy my coffee	1	2	3	4	5	6

Section 3: Other buyers

31. Excepted your most preferred buyer above, did you sell coffee to the other types of buyer?

☐ Yes **(Go to Question 32)** ☐ No

If No, THANK YOU FOR YOUR COOPERATION

32. a. What type of buyer is your second preferred buyer?

☐ Collector agents ☐ Trader ☐ Company

b. Can you please name this buyer? .....

c. Why do you prefer to trade with this buyer?

.....
.....
.....

d. In what form do you sell coffee to this buyer? .....

e. How many years have you been trading with this buyer? .....

33. a. Did you use any postharvest treatment prior to sale to your second preferred buyer?

☐ Yes ☐ No (**Go to Question 34**)

b. If, Yes what chemicals did you use?

.....
……

d. How much does the average cost for chemical?
……

34. a. Did you dry coffee prior to sale to your second preferred buyer?

☐ Yes ☐ No (**Go to Question 35**)

b. If, Yes how long do you dry coffee?
……

……

c. How much does the average cost for drying?.....
d. What percentage of losses occurred during drying period?.....
e. What were the main reasons for this loss?
……

……

35. a. Did you process coffee prior to sale to your second preferred buyer?

☐ Yes ☐ No (**Go to Question 36**)

b. If, Yes How much does the average cost for processing?
……

……

c. What percentage of losses occurred after processing?.....
d. What were the main reasons for this loss?
……
……

36. a. Did you grade coffee prior to sale to your second preferred buyer?

☐ Yes ☐ No (**Go to Question 37**)

b. What percentage of coffee fell into each of the following grades?

Robusta	Percentage (%)
First	
Second	
Third	
Unqualified	

c. What did you do with these unqualifies coffee?

……..…….……

……..…….

……..……...……

37. a. Did you pack coffee when selling to your second preferred buyer?

☐ Yes ☐ No (**Go to Question 38**)

b. If, Yes what materials did you use for packing?

……..…….……

……..……..…….……

c. How much does the materials cost for packing?

……..…….…….……

d. How many people involved in packing?.....
e. How much you pay for one person per day for packing?.....
f. How many kilograms packed per day in total?.....

38. a. Did you store coffee prior to sale to your second preferred buyer?

☐ Yes ☐ No (**Go to Question 39**)

b. If, Yes how long do you store coffee?

……..……

……..……

c. How much does the average cost for store?.....
d. What percentage of losses occurred during store period?.....
e. What were the main reasons for this loss?

……..……..……

……..…….……

39. a. Were you responsible for the cost of delivering coffee to your second preferred buyer?

☐ Yes ☐ No (**Go to Question 40**)

b. If, Yes how much the average cost of delivering?.....

c. What percentage of losses occurred during transport?.....

d. What were the main reasons for this loss?

……..……..……

……..……..……

40. a. Were you responsible for the loading and unloading cost?

☐ Yes ☐ No (**Go to Question 41**)

b. If, Yes how much the average cost of loading/unloading?.....
……..……..…..…

41. a. FOR THE LAST COFFEE SEASON, what were the lowest, highest and average prices you received PER KG by grade/ungraded from your most preferred buyer?

Robusta	First	Second	Third	Ungrade
Highest				
Lowest				
Average				

b. Has the price increased/decreased or stayed the same over last 12 months?

☐ Increased ☐ Decreased ☐ Stayed the same

c. Why has the price changed?

……..……

……..

42. a. Do you have a contract with your second preferred buyer?

☐ Yes ☐ No **(Go to Question 43)**

b. How many years has this contract left to run?

…….……..**.....**

c. What were the terms and conditions between you and your second preferred buyer under this contract?

……..……

……..……

……..……

d. What advantages/benefits do you believe you have obtained by operating under this contract?

……..……

……

e. What problems/difficulties have you experienced operating under this contract?

……..……

……..

f. What actions/events have strengthened the relationship?

……..……

……..

g. What actions/events have weakened the relationship?

……..……

……..

43. To what extent is your second preferred buyer able to fulfil your's needs? On a scale from 1 to 6, please indicate how well you think your second preferred buyer can met EACH of these criteria.

(Note: 1 is "not at all well", 2 is "not well", 3 is "partly not well", 4 is "partly well", 5 is "well" and 6 is"very well")

A	able to purchase my harvested coffee all year round	1	2	3	4	5	6

B	provides me with a fair price	1	2	3	4	5	6
C	pays on time	1	2	3	4	5	6
D	rewards me for good quality coffee	1	2	3	4	5	6
E	has a good business reputation	1	2	3	4	5	6
F	provides technical information/advice	1	2	3	4	5	6
G	provides market information	1	2	3	4	5	6
H	offers credit	1	2	3	4	5	6
I	can transport coffee from my farm	1	2	3	4	5	6
J	is willing to meet my immediate needs	1	2	3	4	5	6
K	is geographical close to me	1	2	3	4	5	6
L	have a long-standing relationship	1	2	3	4	5	6
M	communicate regularly	1	2	3	4	5	6
N	my buyer is trustworthy	1	2	3	4	5	6

44. What were the most important things that prevent your second preferred buyer from meeting your needs?

……..……
..……
….....

45. What criteria do you think are most important to your second preferred buyer in their decision to purchase your coffee?

……..……
…..……...

…….

46. On a scale of 1 to 6, please indicate how important you believe EACH of the following criteria were to your second preferred buyer in choosing between ALTERNATIVE GROWERS.

(Note: 1 is "not at all important", 2 is "not important", 3 is "partly not important", 4 is "partly important", 5 is "important" and 6 is "very important")

A	provide large quantities of coffee	1	2	3	4	5	6
B	have coffee in the desired quality	1	2	3	4	5	6
C	have coffee free from physical defects	1	2	3	4	5	6
D	have coffee free from foreign matter	1	2	3	4	5	6
E	have coffee free of pets and deseases	1	2	3	4	5	6
F	have coffee that is well graded	1	2	3	4	5	6
G	have coffee that is well dried	1	2	3	4	5	6
H	have coffee that is good looking	1	2	3	4	5	6
I	have coffee that is large bean	1	2	3	4	5	6
J	have coffee that store well	1	2	3	4	5	6
K	have coffee with the right maturity	1	2	3	4	5	6
L	ability to deliver coffee when required	1	2	3	4	5	6
M	reliable supplier	1	2	3	4	5	6
N	provides coffee at a competitively price	1	2	3	4	5	6
O	able to give credit (deferred payment)	1	2	3	4	5	6
P	willing to meet their immediate needs	1	2	3	4	5	6
Q	have a long-standing relationship	1	2	3	4	5	6
R	have a good business reputation	1	2	3	4	5	6
S	have a contract	1	2	3	4	5	6

47. To what extent do you believe you were able to fulfil your second preferred's needs for EACH of following criteria? On a scale from 1 to 6, please indicate how well you think you can met EACH of these criteria.

(Note: 1 is "not at all well", 2 is "not well", 3 is "partly not well", 4 is "partly well", 5 is "well" and 6 is "verywell")

A	provide large quantities of coffee	1	2	3	4	5	6
B	have coffee in the desired quality	1	2	3	4	5	6
C	have coffee free from physical defects	1	2	3	4	5	6

D	have coffee free from foreign matter	1	2	3	4	5	6
E	have coffee free of pets and deseases	1	2	3	4	5	6
F	have coffee that is well graded	1	2	3	4	5	6
G	have coffee that is well dried	1	2	3	4	5	6
H	have coffee that is good looking	1	2	3	4	5	6
I	have coffee that is large bean	1	2	3	4	5	6
J	have coffee that store well	1	2	3	4	5	6
K	have coffee with the right maturity	1	2	3	4	5	6
L	ability to deliver coffee when required	1	2	3	4	5	6
M	reliable supplier	1	2	3	4	5	6
N	provides coffee at a competitively price	1	2	3	4	5	6
O	able to give credit (deferred payment)	1	2	3	4	5	6
P	willing to meet their immediate needs	1	2	3	4	5	6
Q	have a long-standing relationship	1	2	3	4	5	6
R	have a good business reputation	1	2	3	4	5	6
S	have a contract	1	2	3	4	5	6

48. a. What were the most important things that prevent or stop you from meeting your second preferred buyer's needs?

……..……

……

……..……

b. What things can you do to improve your ability to fulfil your second preferred buyer's needs?

……..……

……..

……..……

49. How would you describe the nature of your relationship with your second preferred buyer?

……

……

……

……

50. Please respond to EACH of the following statements concerning the nature of the relationship between you and your second preferred buyer. Please circle your answer.

(Note: 1 is "not at all agree", 2 is "not agree", 3 is "partly not agree", 4 is "partly agree", 5 is "agree" and 6 is " totally agree")

SATISFACTION							
1	I am satisfied with my second preferred buyer payment term	1	2	3	4	5	6
2	Dealing with my second preferred buyer is less risky than others	1	2	3	4	5	6
3	My second preferred buyer purchases my coffee at a mutually agreed price	1	2	3	4	5	6
4	My second preferred buyer responds quickly to my concerns	1	2	3	4	5	6
5	My second preferred buyer purchases my coffee all year round	1	2	3	4	5	6
6	My second preferred buyer often meets my expectation	1	2	3	4	5	6
7	My second preferred buyer and I have a close personal relationship	1	2	3	4	5	6
8	My second preferred buyer has the best offer relative to the other traders	1	2	3	4	5	6
9	I am satisfied with my transactions with my second preferred buyer	1	2	3	4	5	6
TRUST							
1	I trust my second preferred buyer	1	2	3	4	5	6
2	My second preferred buyer has a good business reputation	1	2	3	4	5	6
3	My second preferred buyer considers my best interests	1	2	3	4	5	6
4	My second preferred buyer keeps their promises	1	2	3	4	5	6
5	My second preferred buyer is always honest	1	2	3	4	5	6
6	I belive the information provided by my second preferred buyer	1	2	3	4	5	6
7	My second preferred buyer follow the agreement between us	1	2	3	4	5	6

8	I know my second preferred buyer very well	1	2	3	4	5	6
COMMITMENT							
1	I expect my relationship with my second preferred buyer to continue	1	2	3	4	5	6
2	It is more cost effective for me to rely on my second preferred buyer than search for alternative buyers	1	2	3	4	5	6
3	My second preferred buyer makes an effort to help me	1	2	3	4	5	6
4	I do not intend to change my second preferred buyer	1	2	3	4	5	6
5	My second preferred buyer do not break the commitment between us	1	2	3	4	5	6
COMMUNICATION							
1	My second preferred buyer keeps me well informed on price in the coffee market	1	2	3	4	5	6
2	My second preferredbuyer frequently suggests me how I can improve the level of product quality	1	2	3	4	5	6
3	We often discuss better ways to pack, grade, store, and process coffee	1	2	3	4	5	6
4	I have frequent contacts with my second preferred buyer	1	2	3	4	5	6
5	It is relatively easy to contact my second preferred buyer	1	2	3	4	5	6
COOPERATION							
1	My second preferred buyer provides financial assistance	1	2	3	4	5	6
2	My second preferred buyer keeps me well informed on technical matters	1	2	3	4	5	6
3	I prefer to transact with local buyer	1	2	3	4	5	6
4	My second preferred buyer is willing to share the risk	1	2	3	4	5	6
5	My second preferred buyer and I work together for mutual benefits	1	2	3	4	5	6
6	There is a good cooperation between my second preferred buyer and myself	1	2	3	4	5	6
POWER							
1	My second preferred buyer has all the power in our relationship	1	2	3	4	5	6

2	My second preferred buyer controls all the information in our relationship	1	2	3	4	5	6
3	My second preferred buyer will not take advantage of a strong bargaining position (no price pressure)	1	2	3	4	5	6
4	My second preferred buyer exerts a strong influence over me	1	2	3	4	5	6
5	I must do what my second preferred buyer says	1	2	3	4	5	6
6	My second preferred buyer has the right to buy or not to buy my coffee	1	2	3	4	5	6

[THANK YOU FOR PARTICIPATING IN THIS REVIEW. YOUR TIME AND THE INFORMATION THAT YOU PROVIDED ARE GREATLY APPRECIATED]

ID:……

COFFEE INTERMEDIARY QUESTIONNAIRE

Name of participant: …….Contact: ……..……

Section1.About your business

1. a. Location of your business: ……..…….……..

b. Type of business (please tick appropriate box below)

☐ Collector agents ☐ Trader ☐ Company

c. Are you engaged in any other activities apart from coffee trading?

……

……

2. For how many years have you been buying/selling coffee: ….……years

3. What quantity of coffee did you purchase?

Variety	**Last year (kg)**	**This year (kg)**
Robusta		

4. a. **Next year**, do you expect your purchase to (Please tick appropriate box below)

☐ increase ☐ decrease ☐ stay the same

b. If your answer is to increase or decrease, why do you expect your purchase to change?

……..……

……

……

5. a. Are your purchase constant all year round?

☐ Yes ☐ No

b. If NO, at what time of the years do purchase peak?

……..……..……

……

……

Section 2.From whom you purchase coffee

6. a. From how many suppliers did you purchase coffee? ……..…….suppliers

b. FOR THE LAST 12 MONTHS, total amount Robusta that you purchased from each of the following suppliers?

Suppliers	**Robusta**	
	Cherry	Green bean
Farmers		
Collector agents		
Traders		
Companies		
TOTAL		

c. Has this amount changed over the last 2 years?

☐ Yes ☐ No

d. If Yes, why has this amount changed?

……..……..…

……

……

e.What type of supplier is your most preffered suppliers?.....

f. Can you please name your most preffered suppliers?.....

g.For how many years have you been trading with your most preffered suppliers? ……..…years

h.If you do not purchase any coffee from the rest, why is that ?

Collector agents:…….…….

…….……..……..……

Traders: ……..…..…

…….…….……..

Company:……..……..……
……..……..

7. a. Did you have a contract with your most preferred supplier?

☐ Yes ☐ No **(Go to Question 8)**

b. How many years has this contract left to run?

…..…….....**.....**

c. What were the terms and conditions between you and your most preferred supplier under this contract?

…….……..……

…….…..……

…….……..……

d. What advantages/benefits do you believe you have obtained by operating under this contract?

……..…….

……

e. What problems/difficulties have you experienced operating under this contract?

……..……..……

……..

f. What actions/events have strengthened the relationship?

……..……

……..

g. What actions/events have weakened the relationship?

……..……

……..

8. a. Were you responsible for the cost of receiving coffee from your most preferred supplier?

☐ Yes ☐ No (**Go to Question 9)**

b. If, Yes how much the average cost of transporting?.....

c. What percentage of losses occurred during transport?.....

d. What were the main reasons for this loss?

……..……...……..……

……..……..……..…….

9. a. Were you responsible for the loading and unloading cost?

☐ Yes ☐ No (**Go to Question 10**)

b. If, Yes how much the average cost of loading/unloading?.....
……..……..……

10. a. Did you provide bag for your most preferred supplier?

☐ Yes ☐ No (**Go to Question 11**)

b. If, Yes what was the cost for a bag?.....

11. What is the reasons for choosing to purchase coffee from your most preferred supplier?
.....
.....
.....

12. a. FOR THE LAST COFFEE SEASON, what were the lowest, highest and average prices you paid PER KG by grade/ungraded to your most preferred supplier?

Robusta	First	Second	Third	Ungrade
Highest				
Lowest				
Average				

b. Has the price increased/decreased or stayed the same over last 12 months?

☐ Increased ☐ Decreased ☐ Stayed the same

c. Why has the price changed?

……..……...……

……..……..

13. On a scale of 1 to 6, please indicate how important were EACH of the following criteria in choosing between ALTERNATIVE SUPPLIERS.

(Note: 1 is "not at all important", 2 is "not important", 3 is "partly not important", 4 is "partly important", 5 is "important" and 6 is "very important")

A	provide large quantities of coffee	1	2	3	4	5	6
B	have coffee in the desired quality	1	2	3	4	5	6
C	have coffee free from physical defects	1	2	3	4	5	6
D	have coffee free from foreign matter	1	2	3	4	5	6
E	have coffee free of pets and deseases	1	2	3	4	5	6
F	have coffee that is well graded	1	2	3	4	5	6
G	have coffee that is well dried	1	2	3	4	5	6
H	have coffee that is good looking	1	2	3	4	5	6
I	have coffee that is large bean	1	2	3	4	5	6
J	have coffee that store well	1	2	3	4	5	6
K	have coffee with the right maturity	1	2	3	4	5	6
L	ability to deliver coffee when required	1	2	3	4	5	6
M	reliable supplier	1	2	3	4	5	6
N	provides coffee at a competitively price	1	2	3	4	5	6
O	able to give credit (deferred payment)	1	2	3	4	5	6
P	willing to meet their immediate needs	1	2	3	4	5	6
Q	have a long-standing relationship	1	2	3	4	5	6
R	have a good business reputation	1	2	3	4	5	6
S	have a contract	1	2	3	4	5	6

14. To what extent is your most preferred supplier able to fulfil your needs? On a scale of 1 to 6, please indicate how well you think this preferred supplier can meet EACH of these criteria.

(Note: 1 is "not at all well", 2 is "not well", 3 is "partly not well", 4 is "partly well", 5 is "well" and 6 is "very well")

A	provide large quantities of coffee	1	2	3	4	5	6
B	have coffee in the desired quality	1	2	3	4	5	6
C	have coffee free from physical defects	1	2	3	4	5	6
D	have coffee free from foreign matter	1	2	3	4	5	6

E	have coffee free of pets and deseases	1	2	3	4	5	6
F	have coffee that is well graded	1	2	3	4	5	6
G	have coffee that is well dried	1	2	3	4	5	6
H	have coffee that is good looking	1	2	3	4	5	6
I	have coffee that is large bean	1	2	3	4	5	6
J	have coffee that store well	1	2	3	4	5	6
K	have coffee with the right maturity	1	2	3	4	5	6
L	ability to deliver coffee when required	1	2	3	4	5	6
M	reliable supplier	1	2	3	4	5	6
N	provides coffee at a competitively price	1	2	3	4	5	6
O	able to give credit (deferred payment)	1	2	3	4	5	6
P	willing to meet their immediate needs	1	2	3	4	5	6
Q	have a long-standing relationship	1	2	3	4	5	6
R	have a good business reputation	1	2	3	4	5	6
S	have a contract	1	2	3	4	5	6

15. a. What were the most important things that prevent or stop your most preferred supplier from meeting your needs?

.....
.....
.....

b. What did you think your most preferred supplier can do to improve the quality of coffee they supply?

.....
.....
.....

16. What criteria do you think were most important to your most preferred supplier in choosing to sell coffee to you?

.....
.....
.....

17. On a scale of 1 to 6, please indicate how important you think EACH of the following criteria were to your most preferred supplier in choosing between ALTERNATIVE BUYERS. Please circle the appropriate response.

(Note: 1 is "not at all important", 2 is "not important", 3 is "less important", 4 is "partly important", 5 is "important" and 6 is "very important")

a	able to purchase supplier's coffee all year round	1	2	3	4	5	6
b	provides supplier with a fair price	1	2	3	4	5	6
c	pays on time	1	2	3	4	5	6
d	rewards supplier for good quality coffee	1	2	3	4	5	6
e	has a good business reputation	1	2	3	4	5	6
f	provides technical information/advice	1	2	3	4	5	6
g	provides market information	1	2	3	4	5	6
h	offers credit	1	2	3	4	5	6
i	can transport coffee from supplier's farm	1	2	3	4	5	6
j	is willing to meet supplier immediate needs	1	2	3	4	5	6
k	is geographical close to supplier	1	2	3	4	5	6
l	have a long-standing relationship	1	2	3	4	5	6
m	communicate regularly	1	2	3	4	5	6
n	is trustworthy	1	2	3	4	5	6

18. To what extent do you believe that you were able to fulfil your most preferred supplier's needs on EACH of the following criteria? Please circle the appropriate response

(Note: 1 is "not at all well", 2 is "not well", 3 is "partly not well", 4 is "partly well", 5 is "well" and 6 is"very well")

A	able to purchase supplier's coffee all year round	1	2	3	4	5	6
B	provides supplier with a fair price	1	2	3	4	5	6
C	pays on time	1	2	3	4	5	6
D	rewards supplier for good quality coffee	1	2	3	4	5	6
E	has a good business reputation	1	2	3	4	5	6

F	provides technical information/advice	1	2	3	4	5	6
G	provides market information	1	2	3	4	5	6
H	offers credit	1	2	3	4	5	6
I	can transport coffee from supplier's farm	1	2	3	4	5	6
J	is willing to meet supplier immediate needs	1	2	3	4	5	6
K	is geographical close to supplier	1	2	3	4	5	6
L	have a long-standing relationship	1	2	3	4	5	6
M	communicate regularly	1	2	3	4	5	6
N	is trustworthy	1	2	3	4	5	6

19. a. What were the most important things that prevent you from meeting your most preferred supplier's needs?

.....
.....
.....

b. What things did you believe you can do to improve your ability to fulfil your most preferred supplier's needs?

.....
.....
.....

20. How would you describe the nature of your relationship with your most preferred supplier?

.....
.....
.....

21. Please respond to EACH of the following statements concerning the nature of the relationship between you and your most preferred supplier. Please circle your answer.

(Note: 1 is "not at all agree", 2 is "not agree", 3 is "partly not agree", 4 is "partly agree", 5 is "agree" and 6 is " strongly agree")

SATISFACTION							
1	I am satisfied with my most preferred supplier payment term	1	2	3	4	5	6
2	Dealing with my most preferred supplier is less risky than others	1	2	3	4	5	6

3	My most preferred supplier purchases my coffee at a mutually agreed price	1	2	3	4	5	6
4	My most preferred supplier responds quickly to my concerns	1	2	3	4	5	6
5	My most preferred supplier purchases my coffee all year round	1	2	3	4	5	6
6	My most preferred supplier often meets my expectation	1	2	3	4	5	6
7	My most preferred supplier and I have a close personal relationship	1	2	3	4	5	6
8	My most preferred supplier has the best offer relative to the other traders	1	2	3	4	5	6
9	I am satisfied with my transactions with my most preferred supplier	1	2	3	4	5	6
TRUST							
1	I trust my most preferred supplier	1	2	3	4	5	6
2	My most preferred supplier has a good business reputation	1	2	3	4	5	6
3	My most preferred supplier considers my best interests	1	2	3	4	5	6
4	My most preferred supplier keeps their promises	1	2	3	4	5	6
5	My most preferred supplier is always honest	1	2	3	4	5	6
6	I belive the information provided by my most preferred supplier	1	2	3	4	5	6
7	My most preferred supplier follow the agreement between us	1	2	3	4	5	6
8	I know my most preferred supplier very well	1	2	3	4	5	6
COMMITMENT							
1	I expect my relationship with my most preferred supplier to continue	1	2	3	4	5	6
2	It is more cost effective for me to rely on my most preferred supplier than search for alternative suppliers	1	2	3	4	5	6
3	My most preferred supplier makes an effort to help me	1	2	3	4	5	6
4	I do not intend to change my most preferred supplier	1	2	3	4	5	6
5	My most preferred supplier do not break the commitment between us	1	2	3	4	5	6
COMMUNICATION							

1	My most preferred supplier keeps me well informed on price in the coffee market	1	2	3	4	5	6
2	My most preferredsupplier frequently suggests me how I can improve the level of product quality	1	2	3	4	5	6
3	We often discuss better ways to pack, grade, store, and process coffee	1	2	3	4	5	6
4	I have frequent contacts with my most preferred supplier	1	2	3	4	5	6
5	It is relatively easy to contact my most preferred supplier	1	2	3	4	5	6
COOPERATION							
1	My most preferred supplier provides financial assistance	1	2	3	4	5	6
2	My most preferred supplier keeps me well informed on technical matters	1	2	3	4	5	6
3	I prefer to transact with local supplier	1	2	3	4	5	6
4	My most preferred supplier is willing to share the risk	1	2	3	4	5	6
5	My most preferred supplier and I work together for mutual benefits	1	2	3	4	5	6
6	There is a good cooperation between my most preferred supplier and myself	1	2	3	4	5	6
POWER							
1	My most preferred supplier has all the power in our relationship	1	2	3	4	5	6
2	My most preferred supplier controls all the information in our relationship	1	2	3	4	5	6
3	My most preferred supplier will not take advantage of a strong bargaining position (no price pressure)	1	2	3	4	5	6
4	My most preferred supplier exerts a strong influence over me	1	2	3	4	5	6
5	I must do what my most preferred supplier says	1	2	3	4	5	6
6	My most preferred supplier has the right to buy or not to buy my coffee	1	2	3	4	5	6

Section 3. To whom you sell coffee

22. a.To how many buyers did you sell the coffee you have purchased? …….buyers

b. FOR THE LAST 12 MONTHS, how many kg coffee that you purchased was sold to?

Buyers	**Robusta**	
	Cherry	Green bean
Collector agents		
Traders		
Companies		
Total		

c. Has this amount changed over the last 2 years?

☐ Yes ☐ No

d. If Yes, why this amount has changed?

.....
.....
.....

23. a. What type of buyer is your most preferred buyer?

☐ Collector agents ☐ Trader ☐ Company

b. Can you please name your most preferred buyer ? .....

c. Why do you prefer to trade with this buyer?

.....
.....
.....

d. In what form do you sell coffee to this buyer?.....

e. How many years have you been trading with your most preferred buyer?
…….....

f. If you do not sell any coffee to the rest, why is that ? (Please answer about the person you did not trade with)

Collector agents:…….....
.....
Traders: .....
.....

Company:.....
.....

24. a. Did you have a contract with your most preferred buyer?

☐ Yes ☐ No **(Go to Question 25)**

b. How many years has this contract left to run?

…….…….....

c. What were the terms and conditions between you and your most preferred buyer under this contract?

.....
.....
.....

d. What advantages/benefits do you believe you have obtained by operating under this contract?

.....
.....

e. What problems/difficulties have you experienced operating under this contract?

.....
.....

f. What actions/events have strengthened the relationship?

.....
.....

g. What actions/events have weakened the relationship?

.....
.....

25. a. Did you use any postharvest treatment prior to grading or sale to your most preferred buyer?

☐ Yes ☐ No (**Go to Question 26**)

b. If, Yes what chemicals did you use?

.....
.....

c. How much does the average cost for chemical?

.....

26. a. Did you dry/redry coffee prior to grading or sale to your most preferred buyer?

☐ Yes ☐ No (**Go to Question 27**)

b. How much does the average cost for drying?.....
c. What percentage of losses occurred during drying period?.....
d. What were the main reasons for this loss?
.....
.....

27. a. Did you process coffee prior to sale to your most preferred buyer?

☐ Yes ☐ No (**Go to Question 28**)

b. If, Yes How much does the average cost for processing?
.....
.....
c. What percentage of losses occurred after processing?.....
d. What were the main reasons for this loss?
.....
.....

28. a. Did you grade/regrade coffee prior to sale to your most preferred buyer?

☐ Yes ☐ No (**Go to Question 29**)

b. What percentage of coffee fell into each of the following grades?

Robusta	Percentage (%)
First	
Second	
Third	
Unqualified	

c. What did you do with these unqualifies coffee?
.....
.....
.....

29. a. Did you pack coffee prior to sale to your most preferred buyer?

☐ Yes ☐ No (**Go to Question 30**)

b. If, Yes what materials did you use for packing?
.....
.....

c. How much does the materials cost for packing?
.....

d. How many people involved in packing?.....
e. How much you pay for one person per day for packing?.....
f. How many kilograms packed per day in total?.....

30. a. Did you store coffee prior to sale to your most preferred buyer?

☐ Yes ☐ No (**Go to Question 31**)

b. If, Yes how long do you store coffee?
.....
.....

c. How much does the average cost for store?.....
d. What percentage of losses occurred during store period?.....
e. What were the main reasons for this loss?
.....
.....

31. a. Were you responsible for the cost of delivering coffee to your most preferred buyer?

☐ Yes ☐ No (**Go to Question 32**)

b. If, Yes how much the average cost of delivering?.....

c. What percentage of losses occurred during transport?.....

d. What were the main reasons for this loss?

.....

.....

32. a. Were you responsible for the loading and unloading cost?

☐ Yes ☐ No (**Go to Question 33**)

c. If, Yes how much the average cost of loading/unloading?.....
.....

33. a. FOR THE LAST COFFEE SEASON, what were the lowest, highest and average prices you received PER KG by grade/ungraded from your most preferred buyer?

Robusta	First	Second	Third	Ungrade
Highest				
Lowest				
Average				

b. Has the price increased/decreased or stayed the same over last 12 months?

☐ Increased ☐ Decreased ☐ Stayed the same

c. Why has the price changed?

.....

34. In choosing between ALTERNATIVE BUYERS, how important were EACH of the following factors. Please circle the appropriate response.

(Note: 1 is "not at all important", 2 is "not important", 3 is "less important", 4 is "partly important", 5 is "important" and 6 is "very important")

a	able to purchase my coffee all year round	1	2	3	4	5	6
b	provides me with a fair price	1	2	3	4	5	6
c	pays on time	1	2	3	4	5	6
d	rewards me for good quality coffee	1	2	3	4	5	6
e	has a good business reputation	1	2	3	4	5	6
f	provides technical information/advice	1	2	3	4	5	6
g	provides market information	1	2	3	4	5	6
h	offers credit	1	2	3	4	5	6
i	can transport coffee from my store	1	2	3	4	5	6
j	is willing to meet my immediate needs	1	2	3	4	5	6
k	is geographical close to me	1	2	3	4	5	6
l	have a long-standing relationship	1	2	3	4	5	6
m	communicate regularly	1	2	3	4	5	6
n	my buyer is trustworthy	1	2	3	4	5	6

23. To what extent is your most preferred buyer able to fulfil your's needs? On a scale from 1 to 6, please indicate how well you think your most preferred buyer can met EACH of these criteria.

(Note: 1 is "not at all well", 2 is "not well", 3 is "partly not well", 4 is "partly well", 5 is "well" and 6 is"very well")

A	able to purchase my coffee all year round	1	2	3	4	5	6
B	provides me with a fair price	1	2	3	4	5	6
C	pays on time	1	2	3	4	5	6
D	rewards me for good quality coffee	1	2	3	4	5	6
E	has a good business reputation	1	2	3	4	5	6
F	provides technical information/advice	1	2	3	4	5	6
G	provides market information	1	2	3	4	5	6
H	offers credit	1	2	3	4	5	6
I	can transport coffee from my store	1	2	3	4	5	6
J	is willing to meet my immediate needs	1	2	3	4	5	6
K	is geographical close to me	1	2	3	4	5	6
L	have a long-standing relationship	1	2	3	4	5	6
M	communicate regularly	1	2	3	4	5	6
N	my buyer is trustworthy	1	2	3	4	5	6

36. What were the most important things that prevent your most preferred buyer from meeting your needs?

.....
.....
.....

37. What criteria do you think are most important to your most preferred buyer in their decision to purchase your coffee?

.....
.....
.....

38. On a scale of 1 to 6, please indicate how important you believe EACH of the following criteria were to your most preferred buyer in choosing between ALTERNATIVE SUPPLIERS.

(Note: 1 is "not at all important", 2 is "not important", 3 is "partly not important", 4 is "partly important", 5 is "important" and 6 is "very important")

A	provide large quantities of coffee	1	2	3	4	5	6
B	have coffee in the desired quality	1	2	3	4	5	6
C	have coffee free from physical defects	1	2	3	4	5	6
D	have coffee free from foreign matter	1	2	3	4	5	6
E	have coffee free of pets and deseases	1	2	3	4	5	6
F	have coffee that is well graded	1	2	3	4	5	6
G	have coffee that is well dried	1	2	3	4	5	6
H	have coffee that is good looking	1	2	3	4	5	6
I	have coffee that is large bean	1	2	3	4	5	6
J	have coffee that store well	1	2	3	4	5	6
K	have coffee with the right maturity	1	2	3	4	5	6
L	ability to deliver coffee when required	1	2	3	4	5	6
M	reliable supplier	1	2	3	4	5	6
N	provides coffee at a competitively price	1	2	3	4	5	6
O	able to give credit (deferred payment)	1	2	3	4	5	6
P	willing to meet their immediate needs	1	2	3	4	5	6
Q	have a long-standing relationship	1	2	3	4	5	6
R	have a good business reputation	1	2	3	4	5	6
S	have a contract	1	2	3	4	5	6

39. To what extent do you believe you were able to fulfil your most preferred buyer's needs for EACH of following criteria? On a scale from 1 to 6, please indicate how well you think you can met EACH of these criteria.

(Note: 1 is "not at all well", 2 is "not well", 3 is "partly not well", 4 is "partly well", 5 is "well" and 6 is "very well")

A	provide large quantities of coffee	1	2	3	4	5	6
B	have coffee in the desired quality	1	2	3	4	5	6
C	have coffee free from physical defects	1	2	3	4	5	6
D	have coffee free from foreign matter	1	2	3	4	5	6
E	have coffee free of pets and deseases	1	2	3	4	5	6
F	have coffee that is well graded	1	2	3	4	5	6
G	have coffee that is well dried	1	2	3	4	5	6
H	have coffee that is good looking	1	2	3	4	5	6
I	have coffee that is large bean	1	2	3	4	5	6
J	have coffee that store well	1	2	3	4	5	6
K	have coffee with the right maturity	1	2	3	4	5	6
L	ability to deliver coffee when required	1	2	3	4	5	6
M	reliable supplier	1	2	3	4	5	6
N	provides coffee at a competitively price	1	2	3	4	5	6
O	able to give credit (deferred payment)	1	2	3	4	5	6
P	willing to meet their immediate needs	1	2	3	4	5	6
Q	have a long-standing relationship	1	2	3	4	5	6
R	have a good business reputation	1	2	3	4	5	6
S	have a contract	1	2	3	4	5	6

40. a. What were the most important things that prevent or stop you from meeting your most preferred buyer's needs?

.....
.....
.....

b. What things can you do to improve your ability to fulfil your most preferred buyer's needs?

.....
.....
.....

41. How would you describe the nature of your relationship with your most preferred buyer?

.....
.....
.....

42. Please respond to EACH of the following statements concerning the nature of the relationship between you and your most preferred buyer. Please circle your answer.

(Note: 1 is "not at all agree", 2 is "not agree", 3 is "partly not agree", 4 is "partly agree", 5 is "agree" and 6 is " totally agree")

SATISFACTION							
1	I am satisfied with my most preferred buyer payment term	1	2	3	4	5	6
2	Dealing with my most preferred buyer is less risky than others	1	2	3	4	5	6
3	My most preferred buyer purchases my coffee at a mutually agreed price	1	2	3	4	5	6
4	My most preferred buyer responds quickly to my concerns	1	2	3	4	5	6
5	My most preferred buyer purchases my coffee all year round	1	2	3	4	5	6
6	My most preferred buyer often meets my expectation	1	2	3	4	5	6
7	My most preferred buyer and I have a close personal relationship	1	2	3	4	5	6
8	My most preferred buyer has the best offer relative to the other traders	1	2	3	4	5	6
9	I am satisfied with my transactions with my most preferred buyer	1	2	3	4	5	6
TRUST							
1	I trust my most preferred buyer	1	2	3	4	5	6
2	My most preferred buyer has a good business reputation	1	2	3	4	5	6
3	My most preferred buyer considers my best interests	1	2	3	4	5	6
4	My most preferred buyer keeps their promises	1	2	3	4	5	6
5	My most preferred buyer is always honest	1	2	3	4	5	6
6	I belive the information provided by my most preferred buyer	1	2	3	4	5	6
7	My most preferred buyer follow the agreement between us	1	2	3	4	5	6
8	I know my most preferred buyer very well	1	2	3	4	5	6

COMMITMENT							
1	I expect my relationship with my most preferred buyer to continue	1	2	3	4	5	6
2	It is more cost effective for me to rely on my most preferred buyer than search for alternative buyers	1	2	3	4	5	6
3	My most preferred buyer makes an effort to help me	1	2	3	4	5	6
4	I do not intend to change my most preferred buyer	1	2	3	4	5	6
5	My most preferred buyer do not break the commitment between us	1	2	3	4	5	6
COMMUNICATION							
1	My most preferred buyer keeps me well informed on price in the coffee market	1	2	3	4	5	6
2	My most preferredbuyer frequently suggests me how I can improve the level of product quality	1	2	3	4	5	6
3	We often discuss better ways to pack, grade, store, and process coffee	1	2	3	4	5	6
4	I have frequent contacts with my most preferred buyer	1	2	3	4	5	6
5	It is relatively easy to contact my most preferred buyer	1	2	3	4	5	6
COOPERATION							
1	My most preferred buyer provides financial assistance	1	2	3	4	5	6
2	My most preferred buyer keeps me well informed on technical matters	1	2	3	4	5	6
3	I prefer to transact with local buyer	1	2	3	4	5	6
4	My most preferred buyer is willing to share the risk	1	2	3	4	5	6
5	My most preferred buyer and I work together for mutual benefits	1	2	3	4	5	6
6	There is a good cooperation between my most preferred buyer and myself	1	2	3	4	5	6
POWER							
1	My most preferred buyer has all the power in our relationship	1	2	3	4	5	6
2	My most preferred buyer controls all the information in our relationship	1	2	3	4	5	6

3	My most preferred buyer will not take advantage of a strong bargaining position (no price pressure)	1	2	3	4	5	6
4	My most preferred buyer exerts a strong influence over me	1	2	3	4	5	6
5	I must do what my most preferred buyer says	1	2	3	4	5	6
6	My most preferred buyer has the right to buy or not to buy my coffee	1	2	3	4	5	6

[THANK YOU FOR PARTICIPATING IN THIS REVIEW. YOUR TIME AND THE INFORMATION THAT YOU PROVIDED ARE GREATLY APPRECIATED]